

REPORTS FROM THE SCIENTIFIC EXPEDITION TO THE NORTH-WESTERN
PROVINCES OF CHINA UNDER THE LEADERSHIP OF DR SVEN HEDIN

— THE SINO-SWEDISH EXPEDITION —

PUBLICATION 39

VII. Archaeology

8

ARCHAEOLOGICAL RESEARCHES IN THE EDSÉN-GOL REGION INNER MONGOLIA

BY

BO SOMMARSTRÖM

Part I

STATENS ETNOGRAFISKA MUSEUM
STOCKHOLM 1956

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Together with the catalogue prepared

BY

FOLKE BERGMAN

Part I

With 10 Half-Tone Plates, 40 Collotype Plates,
83 Illustrations and Plans in the Text and 3 Maps

STATENS ETNOGRAFISKA MUSEUM
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ABBREVIATIONS AND SYMBOLS

L.	Length
Br.	Breadth
W.	Width
H.	Height
Diam.	Diameter
Th.	Thickness
Gr. M., Gr. W.	Greatest Measurement, — Width
Fr., Fragm., Frs.	Fragment, -s
Sp.	Spun: all kinds of spinning, more or less twisted
Tw.	Twine, twined, twining: 2- or more-ply twined spun material
()	Parenthesis followed by mm or cm indicates an incomplete measurement
A, K, P	Headings of catalogue numbers and site designations made up in Stockholm (A, K) and Peking (P)
K.K.	Khara-khoto
MS, MSS	Manuscript, -s
Mohs	Moh scale. Scratch test (made for the unglazed pottery only) with minerals ranked 1—10 in hardness according to the scale of Moh

PREFACE

At the time of Folke Bergman's demise in 1946 only part of the rich and varied archaeological material gathered for the main part by himself in 1927—1934 in Inner Mongolia and Eastern Turkistan and under his leadership also by other members of the Hedin Expedition had been made public. Three volumes had appeared in the Reports of the Expedition,¹ while Bergman fortunately had completed an extremely detailed catalogue covering the entire material. Since this catalogue is the prerequisite and the framework for the continued labour it might safely be said to have rescued his life's work from oblivion. However, the difficulties were immense — progress with the work has been possible only thanks to unselfish collaboration by specialists in different fields. Since Bergman's death two significant treatises have appeared,² and with the present volume another important step towards the goal is taken.

In 1951 Dr. Bo Sommarström undertook the task of preparing Folke Bergman's material from the Edsen-gol region. At the time neither he nor anybody else could have foreseen how exacting and time-consuming this task would prove to be. Indeed, a great deal of enthusiasm and love of the material were needed to spur the nearly always thankless work of completing another researcher's unfinished manuscript. For a variety of reasons Dr. Sven Hedin's passing away in 1952 occasioned further delay.

In preparing the material entrusted to him Dr. Sommarström has proceeded with painstaking care. Gradually it became apparent that the work would have to be published in two parts. The second volume is expected to be ready next year.

The arrangement of this work on the whole follows Bergman's own plan. Regrettably enough, no appreciable use could be made of those thousands of inscribed wooden slats and other inscribed artefacts which form such an important portion of Bergman's discoveries. They had to be left in Peking, there to face unknown fortunes. Even if transcribed and published by Professor Lao Kan, their identification relative to Bergman's field notes is not yet feasible.

Already during his stay in Peking in 1931—1933 Folke Bergman had commenced preparations for treatment of his collections. Professor Ferdinand D. Lessing, from 1930—1933 attached to the Hedin Expedition, completed a summary of data on Edsen-gol extant in Chinese historical literature.

¹ Sino-Swedish Exp. Publ. No. 7: *Bergman, Folke*, Archaeological Researches in Sinkiang. Stockholm 1939. Sino-Swedish Exp. Publ. No. 15: *Sylvan, Vivi*, Woollen Textiles of the Lou-lan people. Introduction by *Folke Bergman*. With an appendix by *G. Montell*: Spinning tools and spinning methods in Asia. Stockholm 1941. Sino-Swedish Exp. Publ. No. 19: *Hjortsjö, Carl Herman*, and *Walander, Anders*: Das Schädel- und Skelettgut der archäologischen Untersuchungen in Ost-Turkistan. Stockholm 1942.

² Sino-Swedish Exp. Publ. No. 32: Investigation of Silk from Edsen-gol and Lop-nor. Stockholm 1949. Sino-Swedish Exp. Publ. No. 34: *Maringer, John*, Contribution to the Prehistory of Mongolia. Stockholm 1950.

In conjunction with some notes by Bergman this expert material has been made use of in the sections Cartography and History.

Descriptions of the objects are based primarily on Bergman's catalogue. The textile material has been examined and treated by Dr. Vivi Sylwan, who has devoted years to the Hedin Expedition's discoveries. For other sections valuable enlightenment and completions have been kindly furnished by a number of specialists of whom special mention should be made: Sir Percival David, Dr. Bo Gyllensvärd, Professor Erik Norin, the late Dr. Nils Palmgren, and Dr. John Alexander Pope.

Discovery sites and the most prominent ruins had already been described by Bergman. Certain completions have been possible on the basis of data in his diaries, correspondence, field notes, etc.

Similarly, a large part of the pictorial matter for this volume had been prepared by him. Pictures of the collections were taken in the study of the Museum of Far Eastern Antiquities, additional photographic work being subsequently carried out by Mr. N. Ekberg. Folke Bergman himself made drawings, and had drawings made, from a large number of outline and profile sketches. Finally, the artist Jan Cirulis has drawn a number of more detailed figures in the text.

Folke Bergman had also found time to finish assembly sheets of his route maps and to mark in the discovery sites. Most of the less important ruins had from him received only tentative designations; this made necessary a consistently definite numbering so as to render possible references to the finished map. The draft to Maps II and III has been completed by Dr. Sommarström and his brother, Gudmar Sommarström, the latter in his capacity of map editor at Generalstabens litografiska anstalt being also responsible for the technical execution. Professor Erik Norin has scanned this work and thereby contributed valuable viewpoints.

Translation of the Swedish MS has been accomplished, with tireless effort and care, by Miss Kathleen Pain, B. A.

On behalf of the Sven Hedin Foundation the undersigned desires to express his sincere thanks to Professor Johan Gunnar Andersson and Professor Bernhard Karlgren, both of whom as directors of the Museum of Far Eastern Antiquities during many years not only provided a work-room, etc., but also in every other way facilitated Folke Bergman's and subsequently Dr. Sommarström's research.

In the absence of generous assistance on the part of the Humanistic Foundation an expensive preparation and publication of the Hedin Expedition's archaeological material on a scope like the present would never have been possible. Hence I desire to convey to the Board of the Humanistic Foundation an expression of the deep gratitude felt by all people taking an interest in our Scientific Series.

Gösta Montell

GEOGRAPHY

The Edsen-gol region" is a term adopted by European investigation to denote the area in western Inner Mongolia, the longitudinal extension of which is determined by the Edsen-gol river,¹ its bifurcations and terminal lakes. The lateral extent of this area is less well defined, but generally speaking "the Edsen-gol region" can be described as a single elongated river oasis, flanked by vast deserts almost entirely without traces of past settlement.² It is only in the south, at the place where the main Edsen-gol begins after the confluence of its two source-streams the Pei-ta-ho and the Kanchou-ho, that difficulties are experienced in delimiting the investigation area, both topographically and from the point of view of earlier settlement.³

Administratively the Edsen-gol region forms the nucleus of the Autonomy of the Etsina Banner in the Mongolian province of Ninghia;⁴ since about 1729 it has been inhabited by a branch of the Torguts, a nomadic tribe.⁵ The southernmost portion, the Mao-mu oasis and most of the Shuang-ch'eng-tsi oasis as far as the place Adag-tsaghan, is, however, a purely Chinese agricultural settlement belonging to the Mao-mu district, which forms part of the province of Kansu in China Proper and stretches along the Kanchou-ho to the neighbourhood of the town of Chen-yi.

Owing to the difficulty of defining the southern limit of the Edsen-gol region Bergman catalogued the find localities from north to south including those situated south and west of Mao-mu. In the present geographical survey we have, however, observed the customary method of following the course of the river and have consequently begun in the south and ended in the north.

The Edsen-gol receives its waters from the Nan-shan mountain chain, situated in the NE corner of the mighty Tibetan plateau. The Nan-shan extends roughly ESE-WNW; in its NW part the range penetrates as far as latitude 40° in proximity to longitude 98°. Two lower mountain ranges, the Pei-shan in the west and the Ho-li-shan in the east, run parallel with the Nan-shan to the north; between these two chains lies the narrowest part of the province of Kansu, the so-called Kansu corridor. In this depression the mountain streams flow down from the slopes of the Nan-shan in a NNE direction, most of them gradually uniting with the rivers Pei-ta-ho (in the west) and Kanchou-ho (in the east). Much of the water from the rivers is conducted through irrigation canals to the oases of the Kansu corridor; this regulation has caused the lower course of the Pei-ta-ho between the Ying-p'an and the Mao-mu oases to become dried up and, during the irrigation season (May—October), allows the Kanchou-ho to retain only just enough water for the requirements of the Mao-mu oasis, leaving the river system to the north of it without a supply.⁶

On the north flank of the depression the two source-streams encounter the outliers of the Pei-shan and Ho-li-shan respectively and in this way are forced together through the gorge between

these mountains, where they meet at a point whose position is approximately longitude $99^{\circ} 30' 25''$ and latitude $40^{\circ} 20''$. Immediately SE of the junction lies the small walled town of Mao-mu, which has given its name to the southernmost oasis of the Edsen-gol region; this oasis extends about 10 km southwards from the confluence on both sides of the Kanchou-ho.⁷ Between this oasis and the Kao-t'ai district there are three more inhabited oases, Ki-ki-kü on the Kanchou-ho, Shuang-sha-tun and Ta-ts'ao-wan. Northwards the Mao-mu oasis penetrates almost to the ruined town of Kiu-ch'eng, but actually merges into the Shuang-ch'eng-tsī oasis, which is 40 km in length. Its northern part was once cultivated, but it now used as pasturage for the flocks of the Torguts except where it has become a sandy desert or marsh.

If the obstructions — the imposing physical features of the landscape — which were responsible for the confluence of the two source-streams are easily observed, the conditions influencing the main river are more complicated and less clear. Its principal direction up to the terminal lakes is approximately the same as that of the source-streams descending the slopes of the Nan-shan, viz. c. N. 35° E. The factors determining its direction have been the NNE outliers of the Pei-shan on the west side and a line of fault⁸ that prevented the river from flowing eastwards to the Gurnai depression. After having covered about three eighths of its course through the oases and over a broad belt of sterile gobi plain the Edsen-gol reaches the easternmost offshoots of the Pei-shan range near latitude 41° and passes between two of its isolated sections, Boro-ula and Kuku-ula. Here the Edsen-gol divides for the first time at the south point of the Kuku-ula, Bayan-bogdo, where the westernmost of the Mören-gol's two channels starts; some kilometres further north the second channel of the Mören-gol separates off, but there are besides several other, dried-up river-beds forming a true delta, which even in the summer, when the water is cut off, has pools with fish and small animals, swamps and a luxuriant vegetation. The Kuku-ula, which in most general maps is represented by its highest point, Bayan-bogdo, and is often made to extend much further than it really does, consists of a series of isolated rocks 2—3 km broad and 17 km long; about 50 km north of the last summit in this chain the Edsen-gol divides again, this time into two mainly parallel branches: the western one is the Narin-köl, the eastern, which is now a direct continuation of the Edsen-gol, is the Ikhen-gol.

Hörner's examinations in the autumn of 1932 showed that the double channel of the Mören-gol received less than 2 % of the volume of water in the main river, that the Narin-köl was quite dry, and that the Ikhen-gol received more than 98 %. A later determination, made in the winter of 1933—34, showed that the Narin-köl held water and that the Mören-gol's volume had increased; these two branches certainly flow through the Gobi Desert to a point near the western terminal lake, Ghashun-nor, but as far as is known no longer give off any water.⁹

Northwards from the bifurcation of the Narin-köl and the Ikhen-gol the country becomes increasingly sterile, the rows of trees lining the river-banks grow thinner and the grass-belts diminish. On the west side, the gobi plain stretches practically the whole way along the Narin-köl up to the basin of the terminal lake, but on the east side only to a place named Bukhen-torei halfway to the Tsondol oasis, where the Ikhen-gol forms its second and largest delta. Between the Ikhen-gol and the Gurnai depression the Gobi Desert is crossed by depressions running in a NNE direction, the easternmost of which are overgrown with reeds; they merge into the vast oval Gurnai depression where the vegetation mainly consists of reeds and saxaul and where salt lakes have taken the place of recently extinct lakes. Here the members of the Hedin Expedition found an abundance of Stone Age artefacts.¹⁰

This part of the Little Gobi is bounded on the north by a country, henceforth referred to as the Khara-khoto region, which consists of sedimentary rocks and recent sediments in varying stages of erosion. The boundary line is clearly marked and runs between Bukhen-torei on the Ikhen-gol and Boro-tsonch, a watch-tower at the southern tip of the sickle-shaped depression which was once a prehistoric lake, the "East Lake Etsina". The area enclosed by the Khara-khoto — Bukhen-torei — Boro-tsonch triangle contains most of the oldest dissected sediments, plateaux often long and narrow and disposed in various directions alternate with isolated hills, known as mesas. The difference in height between the summits and the depressions is in places nearly 20 metres. The majority of these sediments are composed of alternating layers of sand and clay, as, for instance, the vast plateau on which the ruined town of Khara-khoto is itself located or the Boro-tsonch mesa. In the parts not as yet invaded by the drift-sand from the extinct ancient lake, grass, reeds, saxaul and tamarisk grow; near Boro-tsonch, for instance, the subsoil water is only about 2 dm below the surface. The only occurrence of eruptive rocks in the entire region between the Ikhen-gol and the west shore of the ancient lake is at the little mountain of Moutch; on the other hand, sections of the east and especially of the north shore of the ancient lake are formed of continuous stretches of low bedrock up to 30—40 km long.

The rest of the Khara-khoto region, which is bounded by the Ikhen-gol, the Ontsein-gol (the easternmost arm of the delta) and the west shore of the ancient lake, is characterized by clay plains covered with gravel, sparse vegetation and, in the driest areas in the east, drift-sand that in places forms dunes 10 m high. Wind erosion has largely split the clay plains into so-called yardangs, which are sometimes two metres higher than the depressions; it is clear from the positions of the ruins that these yardangs were mainly created after the withdrawal of the settlers in the 14th century, for nearly all their buildings stood upon the original surface.

The most striking sediment formations in the region are, however, the countless smoothly rounded clay and sand cones 4—5 m in height and often overgrown with tamarisks, saxaul bushes and grass. They are particularly numerous north and east of Khara-khoto; the Torguts have appropriately named this place Erego-khara-burukh (The Confusing Vegetation-bound Dunes). The geological age of the clay cones has not been determined — most of them are probably pre-Neolithic accumulations of mud from the delta of the ancient lake; some of the cones consist, however, of house remains.¹¹

This gently undulating plain was the largest oasis in the Edsen-gol region until a few centuries ago, watered by a branch of the Ikhen-gol, which subsequently dried up.¹² Rising at Butu-burukh, it had flowed in a NE direction, had branched into several arms and had finally debouched into a part of the ancient lake, Kü-yen-tse, whose last and lowest basin is now covered with a crust of salt. Hundreds of ruins, ruin heaps and scattered finds from c. 100 B.C.—1400 A.D. and traces of fields and irrigation canals indicate that this oasis was the most densely populated part of the entire Edsen-gol region. Near Butu-burukh there are signs of a large canal through which the inhabitants may have tried to conduct the water from the main river to their fields, when the "Etsina river" began to fail.

At Tsondol the Ikhen-gol forms a delta, which in view of the many river-beds and mud deposits certainly deserves the name. The vegetation is luxuriant and in strong contrast to the sand and gravel deserts in the west and east; the delta is also the favorite resort of the Torguts. The delta extends more than 50 km northwards to the great lacustrine basin which is now divided between two lakes, the Ghashun-nor and the Sogho-nor. The four principal arms of the river are, from the

west, the Oboin-gol, the Dunda-gol, the Onder-ellisin-gol and the Ontsein-gol. Only the first two of these convey their waters right to the basin: the Oboin-gol debouches periodically at a place WSW of Tsekha between the Ghashun-nor and the Sogho-nor, and the Dunda-gol debouches into the Sogho-nor. As recently as the beginning of this century the Oboin-gol, the Narin-köl and the bifurcations of the Mören-gol were, however, directly connected with the Ghashun-nor, according to the then existing Russian maps. The two easternmost arms of the river in the Ikhen-gol delta discharge their waters into small lakes in different places during the high-water periods.

By examining and surveying shore-lines Hörner was able to establish the existence of an ancient lake, whose greatest extension is pre-Neolithic and which lay 20 m higher than the Ghashun-nor and 10 m higher than the Sogho-nor, its two residual lakes. This "West Lake Etsina" was about 85 km long from east to west. The bedrock emerges at various points near the shore-lines of the ancient lake and, as in the case of the ancient lake to the SE, the "East Lake Etsina", has to some extent restricted its prolongation northwards. As in other places, the Lop-nor for instance, the continuous deposit of mud and the wind erosion cause the rivers to change their courses and, in consequence, their terminal lakes; for the same reasons dry river-beds and lake basins can again become filled with water.¹³ Thus Hörner remarks that "it is only a question of time when a branch of the Etsingol (i.e. Ontsein-gol) will again find its way into the depression of the extinct East Lake Etsina".¹⁴

As no official geographical survey has as yet appeared, this section has been compiled from information available in scientific publications and travel narratives (see Bibliography: Bergman, Bohlin, Hörner, Montell and Norin, and Stein). The purpose of this section is merely to indicate, in conjunction with the general map, the principal geographical factors which conditioned settlement and the changes they underwent during different periods.

¹ On European general maps this name represents the various local names of the river system (e.g. Goode, 1948, sheet 152); the Chinese equivalent is Ê-tsi-na ho or Jo-shui (e.g. Chung-kuo fen-sheng sin-t'u, 1948, sheet 49). The spelling still varies, the commonest forms being Etsin-gol and Edsin-gol. In this case the true literary form is Edsen-gool, while the local pronunciation of the first part varies between Edsine, Echline and Ejine (cf. Bergman 1939, p. 39, note). The first element of the name can be traced back to the 13th century, when E-tsi-no (Etsina, Etsinai) was the Mongolian term for the region surrounding Khara-khoto and later for the town itself. The older Mongolian *-muren*, river, was exchanged by the Torguts for the synonym *-gol* when they settled in the district in the early 18th century.

² "The Edsen-gol region" is the westernmost part of the immense alluvial Edsen-gol basin, which comprises the Little Gobi and in the east extends to the Yellow River (cf. Berkey and Morris, 1927). The Gurnai depression is usually regarded as belonging to the Edsen-gol region (e.g. by Maringer, 1950), partly on account of its proximity to the river system and its connection with the ancient East Lake Etsina; but geologically it would appear to be in an exceptional position, judging from the incomplete reports which are at present available. The problem is of no interest for this publication, as no historical finds have hitherto been recorded from there; but some might reasonably be expected in the future, as the region was densely inhabited in Neolithic times and still has a large nomad population (cf. Bohlin 1945, p. 320 ff.).

³ The difficulty has not, of course, been overcome by including in this work all the ruins along the Pei-ta-ho and the Kanchou-ho examined or mapped by Bergman. It is, in reality, mainly a case of slight additions to Stein's observations of the easternmost ruins along the Pei-ta-ho, and the important discovery, without precise investigations, of the row of watch-towers with a Limes wall stretching between Mao-mu and Chen-yi.

⁴ Map-sheet No. 30 (the Ninghia Province) of the Chung hua jen min atlas, Shanghai 1953.

⁵ For the Torguts, see p. 23, note 29.

⁶ According to Stein (Ser. pp. 489 sq.; I.A., p. 460), this is not the chief reason for the scarcity of water that has prevailed in the Edsen-gol since late medieval times. An attempt was made to remedy the deficiency by constructing a dam in the Mören-gol near Bayan-bogdo.

⁷ Stein's map-sheet No. 45, Innermost Asia, lets the oasis extend too far south; this was noted by Bergman (1945, p. 134).

⁸ Bohlin 1940, p. 17.

⁹ Hörner 1935, p. 158 sq., and Fig. 6.

¹⁰ See below pp. 14 and 15. For a description of the Gurnai depression, see Bohlin 1945, p. 320 sq., and Maringer 1950.

¹¹ See below the note to Ruined village 100 (Part II).

¹² This was first observed by Kozlov (1925, p. 44) and later thoroughly explored by Stein and Bergman. The expression "the Khara-khoto River", which sometimes occurs in the literature, was not used by Stein who, however, believed that the river had encircled the town (I.A., p. 437); Bergman's investigations showed that Stein's "river-bed" had been dry land throughout the entire period of the known historical settlement, and that the so-called Khara-khoto river had not forked so far to the south, the water supply of the town having been provided by means of canals (Bergman 1945, p. 151). If any name is to be given to the dry river it should thus refer to the region and not to the actual town; the "Kü-yen River" or the "Etsina River" are two names that might be considered; as a temporary name for this book, the latter has been chosen.

¹³ By his investigations into the hydrography of the Lop-nor, which he undertook in consequence of Sven Hedin's stimulating preliminary results, Stein was prepared for observations of these problems before reaching the Edsen-gol region (I.A., p. 429 et seq.). His explorations were continued by members of the Sino-Swedish Expedition.

¹⁴ Hörner 1935, p. 162.

HISTORICAL CARTOGRAPHY

Of the two oldest original maps of China which are still in existence and which were engraved on stone in 1137,¹ the *Hua yi t'u* (Map of China and Foreign Countries)² shows the Edsen-gol region in greatest detail. The direction and length of the source-streams and of the main river, and the position of the terminal lake, are surprisingly correct in relation to the Yellow River, especially if one considers the summary treatment of the other areas on the border of China Proper. The explanation doubtless lies in the fact that the territory between Tun-huang and Ordos formed the kingdom of Si-Hia at the time when the maps were executed.³ This was ruled by the Tanguts and in those days played an important economic and political rôle as one of the parties in a fluctuating triumvirate in the world of Chinese culture, the others being Liao, succeeded by Kin, and Sung.⁴

The main river has no name, unless the name *Jo-shui*, placed by the eastern source-stream immediately south of *Kan* (Kanchou), is the term used for the entire river system up to the great terminal lake. On the northern side of the eastern source-stream stands the name *Ho-li*, but the mountains which still bear this name are not drawn in; on the other hand, one finds mountains by the middle course of the main river, which are probably identical with the Kuku-ula. By the terminal lake are the words *Kü-yen tse sha* (The Kü-yen marshes and sands).

The area between the western source-stream and Tun-huang has been twisted to the SW, undoubtedly for reasons of space.⁵ The position of the three places *Su* (Suchou), *Kua* (Ansi) and *Han Yü-men-kuan* makes it probable that the excessively large lake extending north of Suchou is a combination of the basins of the Hua-hai-tsi and the Su-lo-ho, which are united by the river Si-wan-ho.⁶

Of particular interest for our purpose is the strongly marked defence wall stretching between *Yü-men-kuan* and the Kü-yen marshes in a stiff curve and protecting the north and west frontiers. This wall is evidently a combination of the Han Limes between *Yü-men-kuan* and South Ulan-durbeljin with the isolated towers lining the Edsen-gol and the row of watch-towers between the Mören-gol and the north delta.⁷

The other stone map, *Yü ki t'u*,⁸ which merely shows the course of the Edsen-gol and is besides most sketchy in its treatment of the territories in the northwest, has nevertheless influenced several later general maps of China in their representation of the Edsen-gol region.

The Mongol and Ming Maps

One result of Mongol China's lively intercourse with the Persian-Arabian-Byzantine cultural world was an improvement in the methods of Chinese cartography. Two men in particular exerted

an enormous influence on the subsequent Chinese map-making right up to modern times, viz. Chu Si-pen and Li Tse-min. The former compiled his "map of the world" about 1320, the latter his general map of China with bordering countries about ten years later. These maps have not been preserved in the original.⁹

The Korean K'üan Kin's map of the world *Hun yi kiang li li tai kuo tu ch'ü t'u*¹⁰ exists in the form of a copy from about 1500. The original was completed in 1402 primarily on the basis of Li Tse-min's *Sheng kiao kuang pei t'u*. As in the case of the Sung maps of 1137 mentioned above, the territories in the northwest are distorted and contracted; the topographical details have been augmented at the expense of the Edsen-gol region but, in return, our investigation area has been connected with the Gobi Desert (*Sha-mo*) and has received two extra place-names.

Thus the name *Yi-tsi-nai* occurs for the first time on an original map; this was the first Chinese transcription for "Etsina", the fundamental element in "Edsen-gol".¹¹ The three Chinese characters are inside a rectangular compartment which covers most of the Edsen-gol region up to a small empty roundel undoubtedly representing the two terminal lakes in the "West Lake Etsina". By the "terminal lake" is the name of a mountain, *?-ta-shan*, which may refer to the Jinst hill or possibly to the Tostu range in the far north. East of the lake and in a comparatively correct position is the name *Kü-yen-tse* (The Kü-yen marshes).

In 1541, Lo Hung-sien made his first rough draft of a map of the world, *Kuang yü t'u*.¹² The first printed edition of this, an atlas of 48 sheets dating from c. 1555, is extant as well as numerous subsequent editions and revisions. It is considered to have been of greater significance for Chinese map-making during the Ming and Ts'ing dynasties than any other cartographical work, not excluding the Jesuit atlases of 1718—19 and 1760.¹³ The entire extension of the Edsen-gol region is shown on two of the sheets, but as their treatment of our region is so summary they can be disregarded here.¹⁴ A third sheet, *Kansu Shan-tan pien t'u* (Fuchs 1946, Pl. 28), is more interesting, although it only includes the southernmost part of the main river apart from the area lying between the two source-streams and a portion of the province of Ts'ing-hai.

The western source-stream, the *Ping-ho* (the Ice River), flows through the Suchou oasis to its NE corner and shortly afterwards passes a limes stretching in an ESE direction. Instead of continuing up towards a mountain pass, which should correspond to hills SW of the Kin-t'a oasis, the river bends off due east and unites with the eastern source-stream, *Ho-li-ho* (alternatively *Chang-ye-ho*), immediately SW of Chen-yi. On the south side of this eastern branch of the *Ping-ho* stretches the continuation of the Suchou Limes. At the upper edge of the map near the place where the *Ho-li-ho* bends off to the NE and thus merges into the Edsen-gol the following words occur: "The river enters the *Yi-tsi-nai* lakes (*hai-ts'i*) at 1200 li's distance from Chen-yi."¹⁵

There are various circumstances here which indicate that the Kansu sheet reflects the true conditions prevailing in the 16th century as regards the administrative units and the defence system: the Edsen-gol region lay outside the domains directly controlled by the Chinese in conformity with the policy of isolation pursued by the Ming dynasty.¹⁶ Since the map is correct in these respects, there is justification in assuming that it is so also in the case of such a dominant feature as the east branch of the *Pei-ta-ho* (*Ping-ho*). Naturally, water can still have run in the usual channel between the Suchou, Kin-t'a and Mao-mu oases; the important point is, however, that a basin must have been formed between the source-streams in an area now covered by salt marshes and that this caused a reduction in the quantity of water received by the main Edsen-gol river. When and how the river became diverted is a problem which still awaits solution.¹⁷

Two Early Manchu Maps

A valuable link between *Kuang yü t'u* and the Jesuit atlas of 1718—19 is provided by Huang Tsung-hi's *Chung kuo ti t'u* of 1673, a general map of China with bordering countries.¹⁸ Lo's Kansu map has been made use of in several respects, and thus the Pei-ta-ho has the same eastward course after Suchou here too. The unnamed main river follows the correct NNE course, as in most of the previous Chinese maps. The oval terminal lake, which contains the names *Yi-tsi-nai* and *Kü-yen-tse*, is encircled by two narrow river branches debouching into a belt-like desert zone. These branches are presumably an early attempt to render either the bifurcation at Bayan-Bogdo or the delta at Tsondol.

While the Jesuits were still engaged upon the preliminary work in connection with their comprehensive atlas, Yen Yung compiled in 1714 his general map of China, *Ta Ts'ing yi t'ung t'ien hia ts'üan t'u*.¹⁹ It is very much like Huang's map, but differs in the following important respects. The Bayan-bogdo bifurcation is now clearly represented, although placed slightly too far south. The left fork, corresponding to the Mören-gol but with NE course,²⁰ drains into a sickle-shaped *Kü-yen-tse*, situated in the desert zone NE of *Kü-yen ch'eng*; the east fork ends, choked with sand, by an unidentified name. Judging by appearances, Yen has mixed up the middle and the north delta and besides has failed to grasp how new reports on the existence of two terminal basins (the lakes in the "West Lake Etsina" and the salt marsh in the "East Lake Etsina") should be correctly interpreted.²¹

The Pei-ta-ho still bends off to the east, but a short branch directed to the east and northwest may perhaps be intended for the old river-bed.

The Jesuit Atlas of 1718—19 and d'Anville's Atlas of 1733—37;^{22a} the Jesuit Atlas of 1760

A comparison between d'Anville's maps and earlier maps shows that the Edsen-gol region as well as Kansu were visited and surveyed by the Jesuits or their collaborators in connection with the work on the first atlas.^{22b} The source-streams up to latitude 40° are mainly correct. The two terminal lakes also have the correct latitude, 42° 30' N, but the main river, on the other hand, has been ill-treated as regards both course and proportions. Thus bearings appear to have been taken only at latitudes 40° and 42°.

The confluence of the source-streams has been placed half a degree too far north, which has caused compression of the central part of the river system. The most glaring error is, however, that the average direction of the river is N—S instead of N 30° E. For one thing the entire river system has been deflected 20° to the west, for another the only branch plotted north of the Kuku-ula range (probably representing the Mören-gol) has been deflected a further 30° in the same direction. Through d'Anville's revisions of the atlas in 1733 and 1737 these errors were introduced into the European maps and caused much confusion right up to the beginning of the present century.

The nomenclature in d'Anville's atlas is, in the case of the Edsen-gol region, the result of a synthesis between the woodcut and the copperplate editions: thus the place-names are transcribed according to the Chinese text, while the names of rivers and lakes follow the Manchurian-Mongolian original. Of the former, nine in number, only Mao-mu will be mentioned here; this place is located at a point mainly corresponding to the north part of the present Shuang-ch'eng-tsi oasis. Both source-streams are called *Etshine Mouren*, the standard Mongolian synonym for the

Echine-gol of the Torguts. The middle course of the main river has no name, but was no doubt also called *Etshine Mouren*; the last portion, which bends off to the west, is marked *Koundoulen*, which is simply another usual Mongolian word for river. *Soukouc Nor* is the name given to the large western terminal lake and *Sopou Nor* to the eastern lake.

The new, revised edition of the Jesuit atlas which appeared in 1760 on the initiative of the Emperor K'ien Lung, showed a very considerable deterioration in the case of the Edsen-gol region. As before, the European cartographers also followed, with certain modifications, d'Anville's rendering of the first Jesuit atlas.²³

Changes in the Map in the 19th and 20th Centuries

The following cardinal errors occur throughout in the 19th century European representations of the Edsen-gol region: the average course of the main river is N—S instead of NNE, the two source-streams extend too far above Kin-t'a and Chen-yi, and the Bayan-bogdo bifurcation is incorrect or omitted. Only a few of the principal incidents in the cartographical development up to the 1930's, when this region was thoroughly explored, can be related here.

Lapie (1824) has the words "Empire Hia ou Tangoute" right across the source-streams in his historical map; this was evidently misunderstood by the editors of sheet 43 c in Stieler's Hand-Atlas of 1826, where "Tangut" is used as a current folk-name for an area including the Edsen-gol. The sheet also has "Suhuc S(ee)" for the west terminal lake and "Sopu S(ee)" for the eastern one.

Stieler's atlas of 1875 has several important alterations on sheet 44 b, derived from newer cartographical works on China. The confluence has now been moved further south, indeed somewhat too far; this has not been achieved by shortening the lower course of the source-streams, but by a transposition of the entire river system, together with the towns. The main river has been given a slight inclination to the east, and one of the arms of the Tsondol delta (?) has been delineated with the misunderstood term "Kundulen" (river).²⁴ The Kuku-ula is correctly represented as an outlier of the Pei-shan, although the direction is wrong. The Gurnai depression ("Gurnai See'en") now appears for the first time on a European map; the excessively large lake of the K'ien Lung atlas has here been split up into a number of small lakes.

The Russian scientist Potanin was, to my knowledge, the first European after the Jesuits to visit the Edsen-gol region.²⁵ After travelling in NW Kansu he reached the Edsen-gol via the Pei-ta-ho early in June, 1886. He then followed the western shore of the river to the neighbourhood of Bayan-bogdo, continued up the Mören-gol to the western end of the Ghashun-nor and finally crossed the Tostu mountains in the north. The confluence of the source-streams is accurately plotted in relation to latitude 40°, but the direction and outline of the Edsen-gol—Mören-gol are grossly incorrect, exhibiting a wide eastward curve in their middle course. As in the earlier maps, the Ikhen-gol is not drawn in, unless the small bifurcation in the north near the lakes represents this eastern branch of the river.

In simplified form Potanin's map was presented to the general public in 1890 in Bretschneider's Atlas of China.

The Russian geologist Obrutschev followed almost the same route as his compatriot in the autumn of 1894, travelling along the Edsen-gol up towards the terminal lakes on the western side of the river system. Two years later he published an account of his journey accompanied by a

general map; this does not reproduce the Bayan-bogdo bifurcation either, but instead the author has straightened out the river system and improved its orientation.²⁶

The decisive step in the direction of a complete and correct general map was taken when Obrutschev and Kaznakov together made a survey during Kozlov's expedition in 1899—1901.²⁷ Their investigation did not, of course, cover the entire Edsen-gol region, and the area east of the Ikhen-gol, between Tsondol and Gurnai, still remained unexplored. We cannot here embark upon a discussion of topographical details, but must be content to point out that among the new place-names the form Edsen-gol ("Edzin-gol") also occurs for the first time.

During the next few years the Russian results were exploited in various atlases. For example, Stieler's new edition of 1904 (sheet 62) was based on these, but this did not prevent certain otherwise excellent atlases from containing reminiscences of the earlier 19th century maps well into the 1920's.²⁸

During the expedition of 1907—1909 Kozlov twice visited the northern part of the Edsen-gol region, in 1908 and 1909.²⁹ He was prepared in advance for the existence of a ruined town in this district, chiefly from reports made by members of an earlier expedition, and thus his discovery of Khara-khoto was not due to chance. He spent most of his time digging in the town. He determined its position and drew a map of it. He also made a rough sketch of the area north of Bayan-bogdo showing his routes. The most important new features from a cartographical point of view were the "rediscovery" of the salt marsh, which he did not visit however, and the dry river-bed that once conducted water there from the Ikhen-gol. A number of new Mongolian names for places and rivers are also valuable.³⁰

Five years later, that is in 1914, Stein made a brief expedition (five weeks) from Kansu to Khara-khoto and back.³¹ Unfortunately, the resulting map of the Edsen-gol region is not up to his usual standard and cannot be used without reference to the maps compiled by the Russians or by the Sino-Swedish Expedition. Some of the errors were made in the field, obviously by Stein's collaborators on their rapid marches, but the chief responsibility lies with the editors of the Survey of India, who collocated the route maps incorrectly. The series of maps illustrating Stein's journeys was published separately in 1922, but was included six years later, uncorrected, in *Innermost Asia*.³²

The most serious error is that the area north of Bayan-bogdo up to the neighbourhood of Tsondol has been moved about 17 minutes (30 km, 18.5 miles) too far east. A parallel displacement of this kind would have been of less consequence were it not for the fact that the complicated and therefore important delta between Tsondol and the terminal lakes has been subjected to a compromise form of correction which has altered the shape and direction of the rivers.

Irrespective of the defects of the map, Stein achieved outstanding preliminary results regarding the phenomenon of alternating river-beds and terminal lakes. He was the first to show that the Edsen-gol region could also be compared in that respect with the Lop-nor, Su-lo-ho, Hua-hai-tsi and other oases. His view was confirmed by information obtained from the Torguts living in the district; they could remember when the Mören-gol was the main branch, while at the same time the Ikhen-gol was almost dry, thus the very opposite of the conditions prevailing in 1914 and later. Chen's and Hörner's thorough investigations in 1930—33 corroborated his opinion.³³

Langdon Warner's expedition to Khara-khoto in 1923 was, like Stein's, archaeological in character and did not yield any notable cartographical results.³⁴

It was left to the Sino-Swedish Expedition to undertake a comprehensive exploration of the Edsen-gol region; this took place mainly between 1930 and 1933. Bergman spent nine months there

in all, and mapped most of the region, his foremost contribution being an investigation of the Khara-khoto region. Chen specialized on the bifurcations of the river in the north delta, Hörner discovered and charted the two ancient lakes, and Bohlin examined the east part of the Gurnai depression. The entire material has not yet been published; it will appear at the same time as the atlas of the Expedition. So far only sketch-maps have been published; one accompanies Hörner's article on alternating lakes (1935), another Bergman's Swedish report (1935), later reproduced in Sylwan's book (1950). Then there is the general map in the series of Reports of the Sino-Swedish Expedition, compiled on the basis of the route maps by Norin in collaboration with Bergman.

The survey maps (II—III) at the end of this volume exhibit, essentially, the results achieved by the Sino-Swedish Expedition.

As Herrmann (1922) and others have shown, the Chinese used maps already during the Han period and probably some few centuries earlier. As a rather lengthy argumentation is needed to reconstruct maps from the geographical literature which preceded the original maps now extant, this material must be excluded in the present survey. Some information is, however, available in the section dealing with the history of the Edsen-gol region.

¹ These were described and reproduced for the first time by Chavannes in 1903, pp. 214 sqq., maps A and B. Cf. also Herrmann 1922, pp. 262 sqq., Pl. VII, and Soothill 1927.

² Chavannes' map. A, Herrmann's Pl. VII.

³ Even if map A is a direct copy of a map from 1043—48, which Chavannes considers likely, it was nevertheless produced during Si-Hia's period of independence (1032—1227). To explain the matter, as Soothill (1927, p. 545) does, by referring to the conditions prevailing in the period between Han and T'ang is to "carry coals to Newcastle".

⁴ See below p. 20.

⁵ This is a characteristic of several later general maps. In the preface to his 1714 map Yen Yung states that he has intentionally reduced the territories beyond the Chinese frontier (to enable them to be included in his square map); cf. Fuchs 1938, pp. 209 sqq. Strangely enough, the same considerations have evidently led the editors of a highly reputed European atlas to undertake a similar adjustment of the Edsen-gol region (Stieler's Hand-Atlas of 1901).

⁶ Cf. Bohlin 1940, Pl. II.

⁷ The wall on the map constitutes an excellent inner defence girdle for the key areas in the western part of the Si-Hia kingdom, affording special protection against Kara-khitai's Uighurs in the neighbourhood of Hami (Kumul). Stein's and Bergman's observations have shown that many watch-towers flanking the Su-lo-ho, Pei-ta-ho and Edsen-gol had been repaired with bricks in later types of bond than those occurring in Han times. Some of this work was done during the Ming dynasty; other repairs can very well have been carried out by the Tanguts. The final section of the wall should correspond to the Mören-gol line, which was built after Han, and not to the Tsondol Limes, which appears to have been untouched since Han.

⁸ Chavannes' map B.

⁹ Cf. Fuchs 1946. An attempt at reconstruction on the basis of later revisions such as the Ming maps mentioned in the text, would probably shed no light on details.

¹⁰ Cf. Aoyama 1938, Pl. 4 and text, and Fuchs 1946, p. 9 sqq.

¹¹ Here we disregard such later variants as *Yi-tsi-nei*, *E-tsi-nai*, etc.

¹² Cf. Fuchs 1946, who reproduces the 48 sheets in facsimile.

¹³ According to Fuchs 1946, p. 28.

¹⁴ Part is on the general map of China, *Yü ti tsung t'u* (Pl. 1), part on the map showing the source-stream area of the Huang-ho, *Huang-ho t'u* (Pl. 36). Both maps are of the same type as the 1137 map B.

¹⁵ The distance is presumably calculated in so-called "troublesome li", as it is several hundred standard li too long. The same distance is given in 1667 by Ku Tsu-yü for the stretch *Kanchou (hou-) wei — Kü-yen (Tu shi fang yü ki yao, kuan 63)*, which may have some connection with our map in view of its authority.

¹⁶ Lo Hung-sien tells us in his own preface that NW China belonged to those parts of Chu Si-pen's map which he had revised. This accords well with the remarkably good location of many topographical details, as may readily be seen by a comparison with sheets 42 and 46, for instance, in Stein's *Innermost Asia*, Vol. IV; these happen to show approximately the same part of Kansu. Kia-yü-kuan (immediately W of Suchou) was in Ming times the westernmost frontier defence in a deliberately reduced Kansu, whose northern boundary was protected by a limes and watch-towers erected early in the 16th century. These latter fortifications, which were dated by Stein (cf. e.g. I. A., p. 520, *et passim*), correspond quite well with the extended Suchou Limes of our Ming map.

¹⁷ Neither Stein nor any other explorer observed a corresponding river-bed in the marshy land lying between the two source-streams. However, the level is about 100 m lower at the Kanchou-ho than it is at the Suchou oasis and there are no substantial obstructions, so that favourable conditions for a diversion of the Pei-ta-ho do exist. The flat ground and nevertheless moderate gradient should have prevented a possible river from cutting too deep a channel and moreover traces of a channel may lie hidden beneath the drift-sand covering large areas. At Yen-tsi, a place situated at about one third of the distance from the Kanchou-ho, Stein determined the lowest altitude; here a salt marsh indicates a former lake, as is also the case at another place nearer the Kanchou-ho.

Hedin, Stein, Hörner and others have shown that a comparatively small reduction of the volume of water in a river is sufficient to cause the effects of the onsetting drainage of the countryside to be apparent long after the water has returned (cf. e.g. Hörner 1935, p. 164).

It is tempting to associate a possible diversion of the Pei-ta-ho with the drainage process which influenced or caused the abandonment of the Khara-khoto region during the 14th century.

¹⁸ Cf. Fuchs 1938, pp. 208 sqq., map 4.

¹⁹ Ibid., map 5.

²⁰ The entire river system inclines too far to the east, to the NE instead of NNE.

²¹ It seems clear that Yen Yung was greatly influenced by literary sources such as the chapter on geography in *Ts'ien Han shu* and resultant speculations on the position of the *Kü-yen-tse* and *Kü-yen-ch'eng* in relation to the Kanchou-ho (Lu-te, or Chang-ye). This is, of course, a common phenomenon in early Chinese cartography.

^{22a} The most extensive general study of the origin of the Jesuit atlas of 1718—19 has been made by Fuchs, 1935—36, pp. 386 sqq., and 1938, pp. 189 sqq. The atlas was completed in 1718; briefly put, the work consisted in learned Jesuits editing, with the help of a few new place determinations, Chinese provincial and prefectural maps which existed in an official version of 231 sheets. In 1718 a woodcut edition comprising 38 sheets was published, and the following year a copperplate edition of 41 sheets (the so-called Mukden atlas). The Frenchman d'Anville compiled in Paris a map of China by combining the two editions: in 1733 for du Halde's "Description", in 1737 for his own "Nouvel Atlas de la Chine".

^{22b} Probably by Fridelli in connection with his surveying in the "Hami district" in 1711 and 1716; cf. Fuchs 1938, pp. 195—96.

²³ Cf. Herrmann 1922, pp. 290 sqq. His view that this atlas is much better than the preceding one is not applicable in any case to the Edsen-gol region. At the time when he made his study (1922) Herrmann, as he himself states, only had access to revisions of the 1760 map; we have examined the original in the form of a reprint (1932), *Ts'ing K'ien Lung nei fu yü t'u*. The confluence of the source-streams has been placed more than one degree too far north, the names of the places on the west shore have followed suit, and the size of the lakes has been doubled, etc. It is interesting to note that the Gurnai depression (*Ku-cr'h-nai o-mo*, where *o-mo* is probably *ama*, mouth) appears for the first time on a map. It has the shape of a lake.

²⁴ The Jesuit atlas of 1760 has *K'un-tu pi-la* at the point where the main river forks on its way to the two terminal lakes, in other words at Bayan-bogdo or, most probably, Tsondol.

²⁵ Cf. Norlindh 1949.

²⁶ Cf. V. Obrutschev 1896, Chap. 13 and map. During his expedition in 1892—95 he arrived in the autumn of 1894 at Suchou intending to cross over from there to Ordos. He was compelled by circumstances, however, to take the route through the Edsen-gol region. He had no time for exploration while in transit.

²⁷ Cf. Kozlov 1947 (1923) with detailed route map.

²⁸ A contributory cause may have been that the Russian detail maps were not included in a popular book until 1923, when they appeared in Kozlov's account of his 1899—1901 expedition. The Times Survey Atlas of the World, London 1922, has e.g. "Sogok Nor" for Ghashun-nor and an incorrect position for the eastern terminal lake.

²⁹ Cf. Kozlov 1925.

³⁰ Kozlov remained about two months altogether in the region, mainly at Khara-khoto. His restricted route took him to Sogho-nor, along the Ontsein-gol over Bayan-torei to Tsondol and thence both to Dash-obo and to Khara-khoto and Boro-tsonch. It is clear that he did not personally visit the Erego region proper, but kept to the area between the town and the Ikhen-gol. One of his collaborators made an excursion to the east and returned with information obtained from the Torguts at a place about 30 km east of Khara-khoto to the effect that a ruined town existed there named "Boro-khoto" (perhaps our "town" 710?), but was hidden by sand at the moment. It was probably this same collaborator who told Kozlov about the salt marsh and the dry river-bed leading to it. Kozlov (and later Stein) interpreted the depression south of Khara-khoto as a southward branch of the dry river. Of the geographical names "Morin-gol" may be mentioned; if this transcription is correct it lends greater support to the appellation of "horse river" than to that of "wide river" (Mören-gol) proposed by Grönbech.

³¹ Cf. *Innermost Asia*, especially Chap. 12—14.

³² At the beginning of I. A., Chap. 13, Stein himself gives his reasons for his northern detour (from the middle of May to the end of June): these were an archaeological interest in Khara-khoto and a geographical one in the north delta for the purpose of making comparisons with similar areas. His passage to and from Khara-khoto was therefore made at lightning speed, naturally to the detriment of the surveying. Having arrived at the ruined town, he became absorbed in archaeological activities and left the mapping of the delta to Lal Singh and Yakub Khan. The only criticism of the map made by Stein in *Innermost Asia*, concerns the spelling of Sogho-nor (p. 433, note 4).

³³ Stein's and Hörner's descriptions of the alterations in the terminal lakes after Kaznakov's survey in 1899—1901 are based on Lal Singh's chart in the form in which it appears on sheet 46, I. A., Vol. IV; they are thus incorrect in detail even if the conclusions mainly agree.

³⁴ Cf. Warner 1926.

PREHISTORY

Finds of prehistoric nature, mainly comprising objects of stone and pottery, were made by members of the Hedin Expedition in the Edsen-gol region during the 1929—1931 campaign. This material has been collated by Maringer and is included in his work on the collections of prehistoric artefacts from Inner Mongolia assembled by the Hedin Expedition.¹ It should be of interest for various reasons to sketch the prehistory of the Edsen-gol region before proceeding to deal with the historic period of that area.

The finds were picked up from the surface of the ground as was all other prehistoric material from Mongolia with the exception of the finds in stratigraphic juxtaposition at Shabarakh-usu in Outer Mongolia.

Some of the sites are situated inside the actual river-basin (the area of investigation treated in this volume), others in the so-called Gurnai depression to the SE of it. Most of the finds in the former area derive from the lakes in the north, primarily the north shore of the Sogho-nor, while the remainder constitute sixteen small groups, fourteen being from the Khara-khoto region and two from the middle part of the river. Topographical conditions and the fact that collection was unsystematic make it probable that a good many sites were overlooked. The find localities in the Gurnai region are scattered within a narrow strip of ground bordering the crescent-shaped depression which chiefly consists of gravel plains.

Maringer's analysis of the Stone Age material collected by the members of the Hedin Expedition in Inner Mongolia and compared especially with the material gathered by the Andrews Expedition in Outer Mongolia shows, among other things, that the Edsen-gol region (including the Gurnai) may be regarded as one of the four culture provinces in Mongolia. The other three facies are the steppe facies furthest to the east, the Alakshan desert facies in the centre and the Black Gobi facies west of the Edsen-gol. "These facies cultures have obviously influenced each other" (Maringer 1950, p. 204), and to some extent exhibit infiltrations from the North Chinese Stone Age cultures.

Maringer feels that he is able to distinguish a Mesolithic "horizon" of the Shabarakh type in some of the material from Inner Mongolia, the bulk of which is otherwise of Neolithic character. Mesolithic microliths are represented in finds from Ihken-gung and from Gurnai, while some of the microliths of the Sogho-nor finds may possibly originate from a more recent phase.

The Neolithic "horizon" of Mongolia is also characterized by microliths. These certainly exhibit forms of their own, but there are in addition typical Neolithic elements such as arrow-heads, knives, axes, grindstones and potsherds. This Neolithic culture is regarded as having arisen in the districts bordering on Manchuria and Mongolia, into which it later penetrated (Maringer 1950,

p. 203). The most striking element associated with the North Chinese Stone Age cultures is the painted pottery. This is abundantly represented in the Gurnai finds and was collected at two places near the Sogho-nor, at one place by Wayen-torei in the Edsen-gol basin and at the two southern Stone Age sites on the Edsen-gol (Bayan-bogdo and Tsaghan-tokhoi). As in the other pottery the paste of the painted sherds is red and sandy; the painting consists of black geometricized designs. Unfortunately we cannot at present indicate the Chinese group or groups to which our Mongolian material should be assigned; the relative and absolute chronological limits of the former are, moreover, still extremely uncertain. It seems, however, as though Maringer were justified in his view that "the close of the Mongolian Stone Age comes very near to the historical era" and, consequently, that this Stone Age culture can be described as backward, perhaps even Eneolithic (Maringer 1950, p. 208).

The physical features during the prehistoric phases are likely to have remained practically unaltered down to the end of the Neolithic period; the climate gradually changed a little, the water-level fell in the rivers and lakes, the water became more salty, the vegetation was reduced and thus conditions worsened both for animals and men. The find localities show that the Neolithic inhabitants of Mongolia lived in temporary settlements along rivers and lakes or by springs in the steppe areas, supporting themselves as "semi-nomadic hunters, fishers and food-gatherers", although circumstances were at that time more favourable for agriculture than they are now (Maringer 1950, p. 207).

We know very little about the interval between the end of the Stone Age and the middle of the first millennium B. C., when Tokharian, Yüe-chi and Hiung-nu tribes emerge as representatives of an increasingly specialized nomadic way of life. It may reasonably be assumed that a few of the objects included in the "historical" material discovered by the Hedin Expedition and described in this volume are from this unknown intermediate period.

Some few of the finds are, without hesitation, ascribable to the indigenous population residing here before the advent of the Han Chinese about 100 B. C.; one of these, for instance, is the animal plaque shown in Pl. 32:4. Naturally one cannot expect a pastoral people to leave large quantities of artefacts behind them, but there is nevertheless reason to assume that part of the find material will prove referable to the culture of these very people.

¹ J. Maringer, *Contribution to the Prehistory of Mongolia. The Sino-Swedish Expedition*, Publ. 34. Stockholm 1950.

HISTORY

The earliest mention of the Edsen-gol region¹ is in Chapters 110 and 111 of the *Shi-ki*, where an account is given of a campaign led by General Ho K'ü-ping in the summer of 121 B. C. as part of the strategy initiated some few years before for the purpose of driving the Huns (Hiung-nu) out of the confines of the Han empire. Ho's army set out from Pei-ti in the Ordos district and after "2000 li", i.e. c. 1000 km, reached a *Kü-yen*, which was passed; shortly afterwards the Huns were taken unawares in the *K'i-lien* mountains and the foundation was thus laid for Chinese supremacy in NW Kansu and neighbouring areas. With the help of additional information the names of both these places can be identified approximately: the mountains are probably the present Nan-shan or a part of that range, *Kü-yen* being either the whole of the present Edsen-gol river valley or, as was the case a few decades afterwards, the northern portion of it (between Bukhen-torei and the terminal lakes).²

The Chinese spent the next twenty years in consolidating their position in the conquered areas seized from the Huns in the north and northwest. This expansion was marked by compulsory evacuation of the indigenous population, military colonization, and the erection of barriers known as *sai*, of fortresses and of beacons (*feng-sui*). The struggle between the Chinese and the Huns continued over a long period, but from now on the two enemies were separated by a broad desert zone in Inner Mongolia and Eastern Turkestan.³

It is just in a reference to the new Chinese advance positions that we next come across *Kü-yen* in the official sources. In 102 B. C. the Emperor Wu gave orders for the construction of a *sai* (= *limes*) with appertaining fortifications partly north of the Yellow River by the *Lu-k'ü* mountains (probably the Lang-shan mountains) and partly in *Kü-yen*; both localities reach latitude 42° and both contain ruined fortifications from the Han period.⁴ The name *Kü-yen* was reserved for the northern portion while another name was used for the surroundings of Taralingin-durbeljin; if the entire area was fortified or at all events began to be fortified at the same time has not been determined yet.⁵ It was moreover one of the most distinguished generals who supervised the building of the fortifications in the *Kü-yen* region; he was Lu Po-te, Commander-in-Chief and holder of the honorific title of "Subduer of the Waves".⁶

One of the most dramatic of the campaigns at this time was undoubtedly the oft recounted, reckless adventure of the young officer Li Ling in 99 B. C. Starting from *Kü-yen*, he marched a comparatively small force of 5000 foot-soldiers northwards for thirty days in order to fall upon the *Shan-yü*, the supreme chieftain of the Huns. After a series of battles and a heroic retreat he was defeated and captured about 50 km in front of the Chinese border defences. About 400 of his men succeeded in reaching safety behind the Chinese lines, but Li Ling remained a prisoner in the

hands of the Huns until his death in 74 B. C. The exact point at which this episode was enacted is uncertain.⁷

That the defences of the Edsen-gol region played an important rôle throughout the entire first century B. C. is evident from the fact that most of the inscribed wooden slats found in these ruins (c. 10,000, about four hundred of which are dated), derive from this period. However, neither this material nor the official sources provide any information about major political events in which the Edsen-gol region plays a part.⁸

Not until Eastern Han, in the year 73 A. D., does Kū-yen again appear in a prominent place, viz. in the annals of *Hou Han shu*.⁹ Prior to this, most of the Huns had ceased to constitute a threat to China (the turning-point being c. 36 B. C.), but a western branch in Eastern Turkestan had resumed the traditional attacks; these were especially formidable just before 73 A. D. with raids far into the Kansu corridor. The large-scale Chinese counter-attack was led by the famous General Pan Ch'ao, who that very year among other exploits conducted two army divisions over Tsiu-ts'üan (the present Suchou) and Kū-yen respectively. The second of these was in charge of a Chief Commandant Keng Ping. It is quite likely that both forces were heading for Yi-wu (the present Hami), which was captured that very year for the first time and which later became a much frequented depôt station on the northernmost of the three caravan routes through Eastern Turkestan.¹⁰

In the spring of 90 A. D. Kū-yen was again the base of an army division commanded by a younger brother of the Keng Ping already mentioned, Keng K'ui. As Pan Ch'ao was still engaged upon his vast military expeditions in the west, this manoeuvre was probably also again co-ordinated with the main action.¹¹

The small number of dated wooden slats from Wang Mang's time (7—25 A. D.) and the Eastern Han up to 105 A. D., which is the latest date so far found, undoubtedly indicates the reduced military importance of the Edsen-gol region.¹² On the other hand, these wooden records reveal but little about the settlement conditions, although they would appear to have been mainly the same as in the Western Han period. That the military organization, which we will now proceed to describe, operated in about the same way as before, is shown by the book-roll from the Tsakhortei tower, dated 98 A. D., which is indisputably the most significant isolated find in the archaeological collections from the Edsen-gol region.

The Administration of the Edsen-gol Region under the Western and Eastern Han Dynasties

The civil and military administration of the Edsen-gol region would appear to have been governed by the same principles under the two Han dynasties, but in practice re-groupings and changes of name nevertheless took place in the various units. Much work still remains to be done before this heterogeneous material has been reduced to order and can be presented in chronological sequence.

The two organizations coincided in regard to the two largest groups, the commandery (*kün*) and the prefecture (*hien*); at their head was a Governor or Grand Administrator (*t'ai-shou*) and a Chief Commandant (*tu-wei*) respectively. Four names of prefectures occur more or less related to the Edsen-gol region, probably not all concurrently: Kū-yen, Kien-shui, Chao-wu and Hui-shui. We learn from the inscribed wooden slats that Kū-yen was the prefecture in the north, Kien-shui that in the south, both belonging to the Chang-yi commandery; the other two names do not seem

to occur in this primary material. The slats have K^ü-yen as the name of a prefecture for the period 89 B. C.—98 A. D. at least and Kien-shui for the period 65—12 B. C.; great allowances must naturally be made for the gaps in the material. The section dealing with geography in the *Ts'ien Han shu*, which was not finally edited until c. 100 A. D., mentions K^ü-yen and Chao-wu under the Chang-yi commandery and Hui-shui under the Tsiu-ts'üan commandery, but makes no reference whatever to Kien-shui, either there or in any other official historical primary source.¹³ There is thus much to support the view that K^ü-yen was used to denote the north part the whole of the time, while Kien-shui was changed to Chao-wu some time during the transition from the Western to the Eastern Han; whether Hui-shui was simultaneously constituted at the confluence of the two source-streams or whether it existed earlier, is a matter which cannot at present be decided.

In each prefecture the military and civil authorities were kept separate. It has been possible to reconstruct much of the organization of the former with the aid of the inscribed wooden slats excavated in the fortress ruins (Lao Kan 1948), whereas that of the latter is still uncertain. The following sketchy account is not, it must be admitted, based on any profound studies of the researches carried out by Lao Kan, Maspero, Stein and others.

Of the two services, field army and fortifications, we will turn our attention to the latter, as revealed by Lao Kan. Under the Chief Commandant of the prefecture there first came some *hou-kuan* ("defence areas"), each in charge of a *chang-wei* (Commandant of a fortress); we have three *hou-kuan* named in each of the two prefectures K^ü-yen and Kien-shui and a corresponding number of fortress ruins. The next subdivision was called *hou* and was headed by a *hou-chang*, who resided in one of the small strongholds or watch-stations connected with a line of watch-towers; our material comprises 13 *hou* for K^ü-yen and 11 for Kien-shui. Under a *hou* there were evidently different numbers of watch-towers (*feng-sui* or *sui*) varying from two to six with an average of four. Seventy-one towers are recorded by name for K^ü-yen, forty-eight for Kien-shui; most of the names are of two syllables and have a heroic or magically auspicious ring, while a few have only a number. There are about twenty fewer towers in the slat material than there are ruined watch-towers dated to the Han.

The smallest unit, the tower, was manned by an average of ten soldiers including the commander. Their chief duties were signalling and reconnaissance. The quarters by the tower were, however, also used by two other organizations, the field army and courier service. Cavalrymen and infantrymen in training, in reserve or on a war footing encamped in the courtyard or shared the cramped premises with the men on duty. At many towers there were more or less permanent post and courier stations with their own staff. A careful register was kept of the number of despatches, their senders and addressees; the responsible official was a kind of post-master with the rank of *hou-kuan*. The post station also had to provide mounted couriers; records were, for example, kept of the age of the horses and the colour of their coats.

The commandery itself was mainly responsible for recruitment to the army and fortifications, and for the expenses incurred in this connection. Troops were chiefly raised by universal conscription, which lasted from a man's 23rd to his 54th year, but this was supplemented by voluntary service with pay and by different forms of compulsory enlistment, for instance of expatriates and ordinary criminals. The best of the conscripts were picked out as regular soldiers (*cheng-tsu*), primarily for the cavalry; after the first 12-months' training this category was called up every year for a 1-month's refresher course. The remainder of the year they were organized in squads of five or ten men in their home districts, and so could be quickly mobilized in case of war. The

other conscripts were made into frontier guards (*shu-tsu*); they manned the fortresses and watch-towers, usually in their own prefectures. The periods of training and re-training were the same as in the first-mentioned category.

The inscribed wooden slats show that the soldiers were registered for census purposes in the hamlet (*li*), the smallest civil unit. A varying number of hamlets constituted a commune (*t'ing*), governed by a *t'ing-chang*. Then came in their order inspectors, *hien-wei* and magistrates (*ling-chang*) up to the highest official of the prefecture (the *tu-wei*). As the house ruins of the Han have been completely destroyed in the Edsen-gol region, we cannot describe how the villages were planned; but the many localities densely covered with *tatis* suggest villages tightly huddled together in contrast to the isolated farms several kilometres distant from each other which is characteristic of the settlement of the later period. In the NE Erego-khara-burukh there is a small square walled enclosure (K 710) which for various reasons seems as though it might have been the headquarters of the civil town in the Kū-yen prefecture; in the southern oasis we have two "towns" which might be associated with the prefectures Kien-shui, Chao-wu and perhaps Hui-shui.

The Period between Han and Si-Hia

During the San-kuo period and the Tsin dynasty the Edsen-gol region was still registered under the three areas of *Si-hai kün*, Chao-wu and Hui-shui,¹⁴ but the reports are extremely scanty, often merely consisting of comments on the position of a *Kū-yen hai* (the *Kū-yen tse* of Han times).¹⁵ In 220 A. D., the first year of the Wei dynasty, the former commanderies and protective areas (territories: *shu-kuo*) in NW Kansu were combined to form the province of Liang-chou. In the revolts of Chinese as well as of foreign tribes (the Southern Huns and Tibetans) depicted in the San-kuo annals, the Kansu corridor appears to be a veritable hot-bed of trouble, and it is by no means unlikely that the Edsen-gol region was also involved.¹⁶

Under the T'ang dynasty the region belonged to the Shan-tan commandery set up in 743; it is not clear whether *Kū-yen hai* belonged to the region in question.¹⁷ Some decades later the Edsen-gol region together with other parts of Central Asia and NW China fell into the hands of the Tibetans for a brief time¹⁸ and afterwards belonged to various Turkish tribes, being governed by the Uighurs towards the end of the period (10th century).

Quite numerous finds of *K'ai-yüan* coins show that at all events the north part round Khara-khoto was inhabited; this is also confirmed by finds of other objects. It is probable that Khara-khoto was preceded by an earlier town under the T'ang dynasty, which may have stood on the same site but in that case was considerably smaller in size. (See further the description of Khara-khoto.)

The Tangut and Mongol Period

The Edsen-gol region experienced a new era of greatness under the Tangut Si-Hia dynasty (982—1227).¹⁹ This is apparent from the archaeological finds, in the first place, and is indirectly ascertainable from official literary sources although these, as before, provide exceedingly scanty information. The copious finds of polyglot manuscripts and prints chiefly uncovered in the town of Khara-khoto constitute a parallel to the discovery of the inscribed Han slats, but as in the case of the latter much careful research remains to be done before the results of the material can be

fully appraised. We can already say, however, that little new historical evidence is to be expected, since most of the written fragments derive from religious texts, translations of Chinese classics, and the like.²⁰

About thirty years before NW Kansu was wrested from the Uighurs by the Tangut Prince Li Yüan-hao (1036), the north part of the Edsen-gol region was a Tangut outpost on the lines of a "garrison commandery" (*wei-fu-kün*).²¹ A Sung map from the middle of the same century shows the extent of the Tangut domains: they were bounded by the Sung Empire on the south and east, by the Liao (Khitan) on the northeast, the Tatars (Tata) on the north, the Uighur Turks (Hui-hu) on the west, and the Tibetans on the southwest. The boundary in the west ran immediately SE of the present Hami, so that the Edsen-gol region was of immense strategic importance; whether it continued to be a garrison commandery after the Tangut conquest of NW Kansu or whether it was assigned to one of the five prefectures and seven market-places of the kingdom, cannot now be said. The capital of the kingdom was at the site of the present Ninghia on the Yellow River.

The political history of the Si-Hia kingdom is fairly well known;²² it was characterized by constant skirmishes with the neighbouring states, mainly Liao and Sung, but also by an opportunistic diplomacy which at times led to the kingdom acknowledging vassalage to Liao, at least nominally. The population was an intermixture of Tanguts (the politically dominant component), Tibetans, Chinese, Jurjen, Turkic Tatars and primarily Uighurs — a diversity that is also reflected in the polyglot scripts found at Tun-huang and Khara-khoto.²³

We have at present only a general idea of the social organization. This may be summarized by saying that the Si-Hia kingdom had a high standard of culture, essentially Buddhistic but on a Chinese Confucianist basis. Some scholars have tried to draw a parallel between these conditions and the Tibetan theocracy, ascribing to the Tangut ruler ("burhan", derived from Buddha) the rôle of a divinity with a secular regent at his side; this view is perhaps correct in regard to the latter period of the dynasty about 1200, from which time is derived the information pointing in this direction. Buddhism was introduced as early as 1032—1048 under Li Yüan-hao, through the agency of imported Uighurian monks; vast numbers of monasteries and stupas were built and the holy scriptures were translated into the Tangut language and transcribed in the Si-Hia system of writing. This, which is one of the most complicated systems in existence, is ascribed to Li Yüan-hao himself. He is said to have constructed it in 1037, but it is undoubtedly a variant of the Khitan system of writing, which in its turn is derived from the Chinese system. During the 12th century the Chinese Confucian culture became a factor of importance in the Tangut kingdom, and schools were established on the Chinese model in all provincial and district towns — perhaps at Khara-khoto too? — and a learned academy was founded (1145).

The heterogeneous ethnic conditions were reflected in a combination of different economic systems. The Tanguts themselves were evidently farmers in the first place, with camel breeding as a valuable source of livelihood. Trade was largely in the hands of the Chinese, who together with the Uighurs were presumably also responsible for most of the handicraft industries. One must naturally take into account variations entailed by social changes, regional conditions, etc.²⁴

In 1209 the Mongols under Chingghis Khan declared war on Si-Hia, finally conquering it in 1227 and massacring the Tanguts "wholesale". The events leading up to the fall of the Tangut kingdom include many dramatic episodes, and here the name of Khara-khoto in its Chinese form of *Hei-shui* (*ch'eng*) is met with for the first time in Chinese literature. The decisive battle was

fought at Alakshan in the Little Gobi in 1226, after which the Mongol army turned towards the Edsen-gol, where it occupied the said town of Hei-shui.²⁵

The conditions prevailing in the Edsen-gol region during the Mongol period are, again, illustrated by but few records. Marco Polo gives us the name Etzina for the first time in connection with the year 1271; this occurs somewhat later in Mongolian and Chinese literature as *Yi-ts'i-nai* (now usually E-ts'i-na). In 1286 the Edsen-gol region was established as a military district (*tsung-kuan fu*), later as an ordinary district (*lu*). In connection with the former incident we are told in a text that the Etzina administrator asked for 200 soldiers for the purpose of founding, with forcibly requisitioned natives, a military settlement (*t'un-t'ien*); this request was granted.²⁶

In 1372 the Etzina region was captured from the Mongols by the Ming armies, the interior of the town being then probably razed to the ground. Here, too, we have dramatic accounts of final contests of more or less anecdotal character. One episode which bears the mark of truth, is the story of how the Chinese cut off the water supply to the beleaguered town by deflecting that branch of the river which debouched into the East Lake Etsina; these were tactics repeatedly employed in Chinese military history.²⁷

The absence of Ming coins or other datings from the Ming dynasty and the very small number of objects in the archaeological collections of the Expedition assignable to the Ming period, show that the Etsina oasis had become practically depopulated towards the end of the 14th century. We have no certain knowledge of the causes, but several factors must be taken into consideration: hydrographic changes leading to a drying of the northern oasis, the nomadic way of life in those oases which still remained in the area thus reduced (little evidence of which can, of course, be ascertained from the archaeological finds), etc. An important reason for our ignorance of the vicissitudes of this region under the Ming dynasty, is that it obviously lay outside those parts of Kansu controlled by the Chinese.²⁸

The ground is again firm beneath our feet from the moment at which the Torgut nomads emerge; the region was allotted to them in 1729, and there they have lived ever since. They are a branch of the so-called Old Torguts and came primarily under the jurisdiction of the governor of Kansu province.²⁹

The principle work of reference here is still Chang Mu's *Meng-ku yü mu ki* (Chap. 16), published by Ho K'iu-t'ao in 1859; this provides a survey of the entire history of the region. Franke (1944, pp. 87 sqq.) gives a connected account of it, and in other places in the same volume has detailed descriptions from the Tangut period. Lao Kan deals mainly with the Han times in the introduction to his work on the inscribed wooden slats (1943; 1948 a).

The Chinese literature contains extremely few particulars about the region, and these chiefly concern two periods, the Han and the Si-Hia (982—1227). The archaeological expeditions, by their finds of inscribed wooden slats from the former period and MSS and prints from the latter, have considerably augmented our knowledge of these two epochs, but we still know almost nothing about the interval between them.

¹ Here we disregard the vague reports in *Yü-kung*, much discussed by Chinese historians, about the river Jo-shui and the "place" Liu-sha (cf. Franke V, pp. 88 f., Herrmann 1922, p. 199 and *passim*; de Groot 1921, especially pp. 114 and 122 ff.), and Wei Ts'ing's and Ho K'ü-ping's campaigns between 127 and the spring of 121, when the Chinese became acquainted with NW Kansu and perhaps the Edsen-gol region too, although no reliable details are available about the latter.

² The fullest version of this story is in the biography of Ho K'ü-ping, SK 111, where we are twice told that the General did *yü* (Mathews 7642) Kü-yen and afterwards turned to the K'i-lien mountains. Chang Yen says in a note (to the Emperor's speech) that Kü-yen is the name of a river (*shui*); in the somewhat altered, corresponding place in the Han-shu (biography of Ho K'ü-ping), where the verb *tsi* occurs only in the Emperor's speech, another annotator states that *tsi* means to cross over in boats, while another river mentioned in the text at the same time as Kü-yen was

she-waded over (by Ho's army). In SK 110 (history of the Huns), and HS 94 (id.), the account is simplified, the word *kuo* being substituted for *yü*: this means to pass over and is also used in another version of the story, HS 68, the biography of a prince of the Huns, and finally in the annals, HS 6, 2nd year of Yüan-shou. In a note to the section in SK 110, Wei Chao (3rd century A. D.) says that K'ü-yen was the same as the prefecture (established some decades later) of the same name. Chou Shou-ch'ang, quoted by Wang Sien-k'ien, considers that the expression *yü* can be explained by the fact that the K'ü-yen marshes (*tse*) were crossed; whether it was a case of the river, the delta or lakes and marshes is an open question.

The chapter on geography in the Ts'ien Han-shu gives only short commentaries on the K'ü-yen region. Compare also the passages of *Lu-fu* and *Lu-te*, where it is stated: a) that the *Hu-ts'an-shui* (presumably the present Pei-ta-ho) comes from *Nan-k'ing*, flows to the NE past *Lu-fu* in *Tsiu-ts'üan* to the *Hui-shui* and enters the *K'iang-yu* valley; b) that the *K'iang-(ku)-shui* (the present Kanchou-ho—Edsen-gol) is 2000 li long (c. 1000 km), passes by *Lu-te* in *Chang-ye* and *Tsiu-ts'üan* (commanderies) and flows to the NE to K'ü-yen, where it empties into a lake (*hai*); *K'ü-yen tse* (the marsh) is in the NE. It is interesting to note that the Chinese (as late as c. 100 A. D., when the HS was completed) distinguished between a lake and a marsh. This has bewildered many Chinese cartographers and historians.

³ Cf. e.g. Serindia, Chap. XX, pp. 722 sqq.; Franke V, pp. 89 sqq.; de Groot 1921; Hermann's works.

⁴ Cf. e.g. HS 6, 33 a; HS 94 A.

⁵ A wooden slat (No. 303:39, Lao Kan 1943, p. 2 A) bearing a date corresponding to the actual year 102 B. C., was found at Taralingin-durbeljin.

⁶ The same title was conferred upon another general who fought against the Huns, Ma Yüan. The remarkable bronze tally in the form of a tiger, half of which was preserved in the former Eumorfopoulos Collection (cf. Yetts' catalogue, II, Pl. LXIV), belonged to one of these army leaders, as shown by the inscription.

⁷ Cf. SK 110, pp. 29 sqq. and HS 94 A. de Groot 1921, pp. 162 sqq., gives a detailed account of this episode.

⁸ About three-quarters, if I am right, of the wooden slats are transcribed in Lao Kan's *K'ü-yen Han kien k'ao-shi* (1943). The material has been used by him and by others in several articles.

After the above-mentioned single slat dated 102 B. C., there comes a gap until c. 90 B. C., when the datings begin to occur in an unbroken series with between 20 and 50 specimens per 10-year period down to 1 B. C., after which they appear sporadically and singly. Four "peaks" are noticeable: c. 84 B. C., 65 B. C., 36 B. C. and c. 2 B. C. See further below under note 12.

⁹ HHS 2, 11 a (annals) and HHS 19, 18 a (Keng Ping's memoir).

¹⁰ Cf. Franke V, p. 90.

¹¹ HHS 4, 3 b; HHS 23, 10 b (Tou Hien's memoir) and HHS 89, 9 b (history of the South Huns).

¹² Cf. Lao Kan's Introduction (1948 a, pp. 650 sqq.), where this problem is thoroughly discussed; Franke (V, p. 90) regards the end of the wars with the Huns as the main cause. Making due allowance for the lack of material, it looks as though the fortifications were mainly disused between 46 and 76 A. D. The political situation was also fairly quiet in the region, except for the raids of the Western Huns into Kansu just before 73 A. D., and the "forward policy" adopted in 73 A. D. by the Chinese hardly affected fortifications (cf. the corresponding conditions in NW Kansu, where as a result of the offensive, a reduction in the number of dated slats can actually be noted; according to Stein, *Ser.*, p. 732). The latest dated Edsen-gol slats fall under the period c. 90—105 A. D. After the year 102 control was lost over the oases in Sinkiang; it was regained by Pan Chao's son, Pan Yung, in the 123—24 campaign, but was soon lost again; 153 A. D. saw the last Chinese military action west of Tun-huang under the Eastern Han.

¹³ HHS 33, 10 a, relates that under the Emperor An (107—25) K'ü-yen was made into a territory (*shu-kuo*) under the name of *Chang-ye K'ü-yen*. The population then comprised 1560 families totalling 4733 persons. At the end of the dynasty (190 A. D. according to Ch'en Fang-tsi, Chap. 39, 22 b) the name K'ü-yen disappeared from the administration and was replaced by *Si-hai*, first as a *k'ün*, later under the Tsin dynasty as a district (*hien*).

¹⁴ Cf. Ch'en Fang-tsi 1667, Chap. 39, 20 a, 22 b, 24 a.

¹⁵ Cf. e.g. *Meng-ku yu-mu-ki*, Chap. 16.

¹⁶ Cf. Fang 1952, pp. 2 ff.

¹⁷ T'ang-shu, 40, 17 b.

¹⁸ *Meng-ku yu-mu-ki*, 16, 8, where it is stated that the Tibetans (T'u-fan) held the region during the Ta-li reign period (766—779).

¹⁹ Si-Hia is the Chinese name for the dynasty; the Tanguts themselves called it Ta-Hia from 1038 (Cf. Franke V, p. 155; Wittfogel-Feng 1949, p. 60).

²⁰ For a survey of the researches in this sphere, see Franke IV, pp. 159 sqq., with supplementary information in V, pp. 87 sqq.

²¹ *Yüan-shi*, 60, 25 b.

²² It is described in detail by Franke in his fourth volume, pp. 154 sqq., pp. 265 sqq., and in other places. See also Wittfogel-Feng 1949, in index under "Si-Hia"; Haenisch 1948, in index under "Tangut".

²³ The finds comprise Chinese, Tangut, Uighurian, Mongolian and Tibetan paper MSS and paper prints.

²⁴ Cf. Wittfogel-Feng 1949, p. 60, note 9; and Haenisch 1949, note 249.

²⁵ Cf. Franke IV, pp. 265 sqq., and V, notes to the same pages.

²⁶ *Yüan-shi*, 60, under *Yi-tsi-nai lu*, Kansu province, and the notes in *Meng-ku yu-mu-ki*, 16, p. 10.

²⁷ Kozlov touches upon these matters in the account of his journeys (1925, pp. 44 sqq.), and Stein (*I. A.*, pp. 458 sqq.) discusses these facts in considerable detail. The tactics of river diversion were employed in 1209 when the Mongols laid siege to the Si-Hia capital (the present Ning-hia), see Franke IV, p. 267. The change in the course of the Pei-ta-ho discussed above may possibly have taken place in similar circumstances.

²⁸ *Meng-ku yu-mu-ki*, Chap. 16, says: "Under the Ming it was a land outside the two prefectures (*wei*) of Kanchou and Suchou."

²⁹ Cf. Hedin, *History of the Expedition*, I, pp. 176 sqq., where the history of the Torguts is given according to *Meng-ku yu-mu-ki*.

ANCIENT REMAINS IN THE DELTA OF IKHEN-GOL

The exploration of the delta region between Tsondol and the terminal lakes has so far shown the existence of only six ancient ruins, to which may be added a small group of surface finds from a place on the northern shore of Sogho-nor, and some stray finds.

Three of these sites (*K 676, A 1 and A 2*) are the remains of military posts, whilst the others consist of Lamaistic structures: a shrine (*K 677*), a small temple (*2*), and a large circumvallation containing a destroyed temple and house ruins (*1*).

Surface finds K 255

At the end of May, 1930, Folke Bergman was investigating the prehistoric sites at the terminal lakes shortly before beginning his main work in the Edsen-gol region — the investigation of its historical remains.

A prehistoric site near Boro-obo yielded more artefacts than any other in the Edsen-gol region: this is group K. 13255, a description of which will be found on pages 143 ff., in Maringer's study on the prehistory of Mongolia (1950). Among these finds were 11 potsherds, which were first thought by Bergman to be of a late period and, accordingly, noted in his notebook for historical finds constituting the first "post-Han site" (field designation B 1). Later Bergman changed his opinion when making his final catalogue, and classed them together with the prehistoric material.

It is clear, however, that his first impression was the correct one, and Maringer (p. 143) writes: "Of the potsherds found the group of grey hard-burnt sherds (—: 255: 1—11), in part decorated with rows of small stamped triangles (see Pl. XXIII, 1—4), can hardly be derived from the Neolithic period." To this we may add that the sherds 1—9, representing a thin-walled, slender vase, have no true counterparts in the collections of ceramics from the Edsen-gol region; the paste is rather well levigated, contains a small amount of sand, and may be classed as "hard earthenware", according to the tentative limits of pottery classes chosen for this work, since its hardness corresponds to Mohs 6.5. The sherds 10—11, well tempered with sand and thus coarser than the fragments previously mentioned, have direct parallels in pieces of stoneware e.g. K. 13710: 148 and —: 150 (see p. 00).

The vessels were probably dropped by chance.

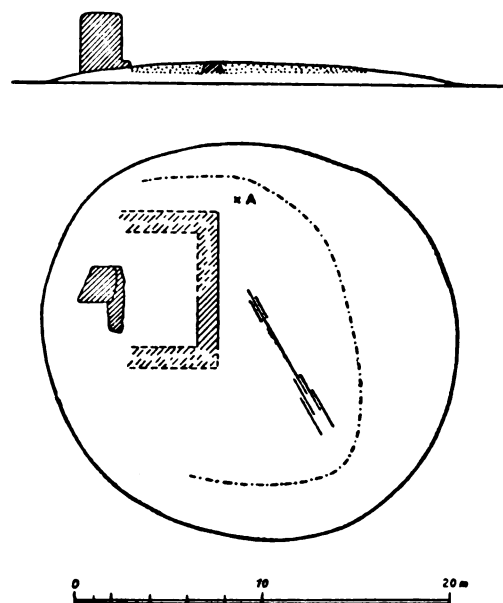


Fig. 1. Plan and section of Watch-tower K 676 (Dor-tsaghan-tsonch).
Dotted line marks extension of cultural deposit.
At A a bronze buckle was found.

Watch-tower K 676

This ruin, called Dor-tsaghan-tsonch by the Torguts, is the northernmost one of all those hitherto found in the Edsen-gol region. It is situated a few kilometres south of the tract where the Oboin-gol discharges into the terminal lake basin, and about 200 metres east of the river-bed (of about 1930).

The actual tower is now 3.7 m high and made of stamped clay. It stands at the edge of a low, rounded mound which has a diameter of about 22 m — see Plan, Fig. 1.

Diggings in the mound uncovered a low, rectangular enclosure of stamped clay which was attached to the eastern side of the tower. On both sides of the enclosure was found a layer containing straw, charcoal, a few animal bones, etc., together with 24 artefacts. Thirteen of the latter objects consisted of insignificant pegs and were later discarded.

The finds show that this post was occupied at about the same period as the town of Khara-khoto. Whether it was also constructed then, or earlier, cannot be determined with any certainty since the description is rather incomplete.

K. 13676:

1. Fragm. of bottom of earthenware vessel, plain and coarse grey ware
- 2-3. Two small frs. from rim of stoneware bowls, brown-glazed and rather thin
4. Fragm. of small whetstone
- 5-6. Two small pieces of flint

P. 370:

1. Bronze buckle, with oval ring and strap-holder formed like a reversed D; broken-off tongue-bar has been fastened with flat ring at middle.

(Similar to Pl. 33:20 which is, however, a little larger and has a nearly rect. strap-holder.) Size 2.6 × 2.4 cm

- 2-4. Three wooden slats, possibly material for spatulas. L. 11.5—8.5, W. 4.3—2.5 cm
5. Fragm. of wooden comb of same type as those found in Khara-khoto (cf. e.g. Pl. 39:10) with a narrow groove cut along the base of the teeth. A couple of strings were found together with this object

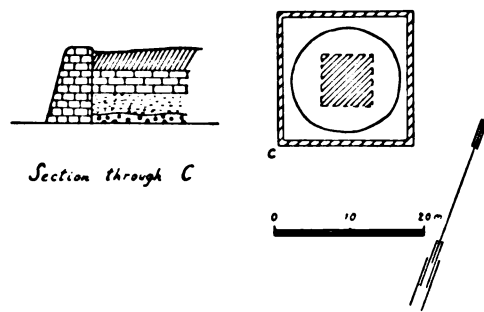


Fig. 2. Plan and section of the ruined shrine K 677.

Shrine K 677

On the southern extremity of the elongated gravel terrace, on which stands the Eastern Temple as well as the residence of the Torgut Prince, there is also situated a rather low, decayed structure called Sair-tsonch.

It is nearly square at its base, which was proved by excavation to consist of an outer wall of bricks and inner layers of earth, bricks, straw, charcoal, and bones. The sides of the outer wall are about 18 m long. The top part of the structure has a base of bricks and rises to about 2 m above the ground; its size at the base is 7×7 m. The thickness of the outer wall is about 60 cm, and its height about 1 m. The plan is shown in Fig. 2. According to Bergman this building was probably a stupa.

35 m SSE of the excavated ruin there is another square mound of insignificant height, smaller than the former one. Three wooden poles, each one foot high, were sticking into the ground close to the sides of the structure.

Tabulated summary of antiquities:

	Approx. total of items
Wooden	
container	1
spatulas, spatula-shaped objects	3
hook-shaped slip	1
carved pegs	6
insignif. pegs and sticks, discarded	8
Caudal vertebra	1
Iron fitting	1
Stone	
whetstone	1
chalcedony	1
flint	1
Clay plaster, samples of	2
Potsherds	2
Fabrics, ropes, cords of silk, wool, cotton and veget. fibres	12
Leather	3
Bark	1

NW of the main ruin, about 50 m away, there are very uncertain traces of a third ruin.

The excavation apparently troubled the lamas in the nearby temple. The last time Bergman passed this place they had erected an *obo* of brushwood on the mound to ward off the ill effects of such disturbance.

The finds consist chiefly of wooden objects and rags of textile fabrics and were collected mainly from the corners B and C. The two potsherds were picked up from the ground. The wooden spoon-shaped spatula P. 429: 29—31 resembles specimens found in Khara-khoto, e.g. Pl. 39: 7.

List of antiquities:

K. 13677:

1. Fragm. of a triangular piece of leather, sharply cut, and in good state of preservation. Th. 3 mm
2. Fragm. of sewn leather of about rectangular form, badly worn. Along two edges there are small holes for seams at intervals of c. 1 cm. Th. 2 mm
3. 1-19. Frs. of silk, woollen, cotton, and veget. fabrics, strings, etc.
 1. Fr. of bluish grey taffeta, discoloured to brown. Folded hem sewn with white z-sp. s-tw. sewing-silk. Cl. $34 \times 22-26$
 2. Fr. of batik-patterned taffeta, woven loosely except towards the selvage. On blue ground a repeat pattern of small reserved crosses in alternate rows; W. of repeat c. 2 cm, H. 4 cm, size of a cross 0.8×1.2 cm. Cl. $34 \times 22-30$
 3. Fr. of nearly white cotton cloth woven of z-sp. yarn. Cl. 12×10
 4. Fr. of undyed yellowish white woollen fabric, 4-heddled twill, warp of s-sp., weft of z-sp. thread. Cl. about $19-24 \times 12$
 5. Frs. of undyed nearly white woollen twill as 4, several pieces sewn together with z-sp. s-tw. yarn. Warp of s-sp., weft of z-sp. threads. Traces of small frs. of leather (?) attached to and partly included in the fabric. Cl. about $15 \times 15-17$
 6. Fr. of undyed yellowish brown woollen twill as 4. Hem fold at one edge, to which is attached another piece of the same kind. Cl. 18×14
 7. Fr. of a sewn band, prob. a sash, of same fabric as 4, cut along the warp. One edge is a hem fold, the other edge a selvage. Size 28.5×5.4 cm. Cl. 16×14
 8. Fr. of undyed yellowish white woollen twill as 4. Cl. c. 14×12
 9. Ditto, purposely creased with irregular seams. Cl. c. 14×14
 10. Ditto, the yarn of one set, however, possibly of animal's hair, the other set of white wool. Cl. 13×10
 11. Fr. of yellowish brown woollen rep fabric. Warp of closely woven z-sp. white and brown

yarn, weft of rather loosely woven z-sp. yellowish brown yarn. Cl. $8 \times 18-22$. Un-attached, two fine, yellowish white s-tw. woollen threads

12. Strands of loosely twisted woollen yarn: yellowish white, mixed dark grey and white, and dark grey, all z-sp. s-tw.
13. Fr. of coarse rep fabric, one set (warp ?) of hazel z-sp. camel's hair, the other set (weft ?) of yellowish brown s-sp. hair-yarn. Cl. c. 4×8
14. Cord of woollen yarn with two knots, z-tw. of two s-tw. strands, each with one member of 12 white s-sp. threads, and one member of 2 light brown z-sp., 3 white s-sp. threads. L. 16 cm, Th. 0.7 cm
15. Rope of veget. fibre (hemp ?), z-tw. of one light s-sp. strand and one light brown s-tw. z-sp. strand. At one end a large reddish-brown knot (blood ?). Th. c. 0.8 cm
16. Rope of light veget. fibre, s-tw. of two z-tw. strands. Th. 0.9 cm
17. Thick rope, loosely z-twined of veget. fibre and yellowish grey to brown wool. L. 22 cm. Th. 1.5 cm
18. Five small frs. of leather (?), overlaid with some yellowish white substance. Th. c. 0.15 cm
19. Small piece of bark in two layers, outer one stained in blue, fold at one edge. Fr. of knife-sheath?

P. 429:

- 1-2. Two pieces of clay plaster with impressions of reed. Baked
3. Small fragm. of grey earthenware vessel with cross-cord impressions
4. Small fragm. of earthenware vessel, thin brick-red paste, the outer surface being partly grimy or black-painted
5. Fragm. of bottom of wooden bowl or dish, charred

6. Fragm. of iron ring-shaped fitting with polygonal (hexagonal or eight-sided) outer side and round inner side. Br. 5 cm
7. Fragm. of small, thin whetstone
8. Small piece of chalcedony
9. A caudal vertebra, possibly ground
10. Small flint flake with notched edge
11. Turned, profiled wooden peg which has had tenons at the ends. Painted black and red. L. 5.9, diam. 0.8 cm
12. Semi-circular peg with unfinished bore-hole near one end. Charred. L. (16), diam. 1.9 cm
13. Branch fork, end of the main part pointed, and the arms cut flat. Partially charred. L. 14.3 cm
14. Small fragm. of semi-circular peg, sloping towards one end, and partially hollowed out at one edge. L. 8.1, W. 1.3 cm
16. Wooden object with about square section; one side is vaulted with chamfered edges and a deep notch in the middle. $7.3 \times 1.2 \times 1.7$ cm
17. Fragm. of small wooden spatula (?)
18. Spatula-shaped peg, the round handle part gradually becoming broad and flat towards the other end. L. 5.8, W. 0.7—1.1, Th. 0.7 cm
19. Small, hook-shaped piece of wooden slip, with a small hole pierced through the end opposite to the wide hook-end. L. 7.1, W. 0.5—0.7 cm
25. Fragm. of wooden spatula. The handle part roughly rounded and a little bent; diam. c. 1.1 cm. The broken-off blade was narrow and rectangular; W. 2.6 cm. Total L. (18.2) cm
26. Branch fork, similar to no. 13 above
- 29-31. Fragm. of wooden spoon-shaped spatula with pointed oval blade, the front of which is slightly concave, the back convex. The handle is bent

Fort A 1

This building, which is called Tsonchein-ama, is the northernmost of the Han ruins, being situated between the Dunda-gol and the Ontsein-gol. The ground around the ruin consists of a dry river-bed, formerly a branch of the Dunda-gol, called Khashiatei-gol. The nearest water is now about 4 km away.

The ruin is that of a square fortress 31×32 m in size, with a gate in the eastern part of the south face. The brick walls have mostly fallen down, the highest remaining ones being about 7 m on the outside; their poor state of preservation is due to the low level of the ground, and the moisture has turned many of the bricks into mud. The thickness of the masonry was once about 3.7 m, which is given as an average on the plan, Fig. 3. There are various forms of bonds, e.g. the "Renaissance bond" of Western countries. The following dimensions of bricks were noted: $39 \times 21 \times 13$, $39 \times 18.5 \times 11$, $37 \times 14 \times 10.5$, $35.5 \times 19 \times 13$, and (incomplete) $37 \times ? \times 12$, $? \times 22 \times 11$, $? \times 17 \times 11$ cm.

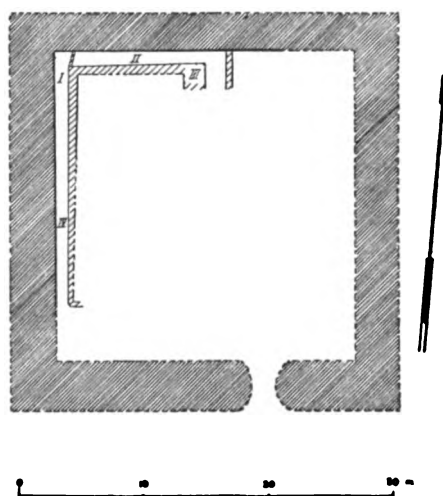


Fig. 3. Plan of Fort A 1 (Tsonchein-ama) with digging localities I—IV. Brick masonry.

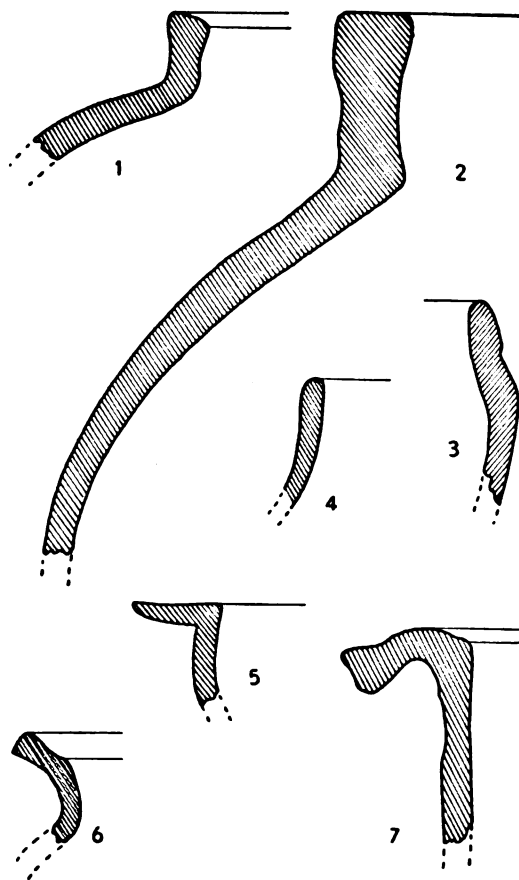


Fig. 4. Sections of rims of earthenware vessels found in Han ruins.
Scale 1/2. 1. (A 2: I) P. 385: 1—2, 2. A. 1: I; 1, 3. A. 13: 2,
4. A. 8: I; 443, 5. A. 1: I; 3, 6. A. 12: 9, 7. A. 8: I; 442.

The NW corner has the largest wall remains, and under their protection debris has accumulated. When digging here the walls of an inner structure were revealed, apparently a rectangular house. Curiously enough this house does not join the wall of the fortress but lies apart from it, a one meter broad passage thus being formed. In this narrow passage the walls were plastered white, and it was once roofed as can be seen from the straw or reed in a 20 m thick layer below fallen bricks and earth. A loose piece of white plaster had a painted black square frame with five Chinese characters, literally reading "Sheep Head Stone 500".¹

Practically everything from the east and south wall of the inner house has gone. A lower narrow wall is built across the passage in the NW corner. The passage continues round the NE corner of the house, where a short wall projects from the wall of the fort.

The passage seemed to be the most likely place for archaeological finds, as the layers of debris were thickest there. In fact, the excavation yielded so many finds here, at four different spots (Localities I—IV), that the other parts of this site were left unexcavated except for a few test diggings.

¹ This *Yang-t'ou shi wu-pai* is not found in the list of identified names of military posts put together from the *Han kien* by Lao Kan (1944, ts'e 1, pp. 27 A ff.). Most likely this was a designation of a military unit.

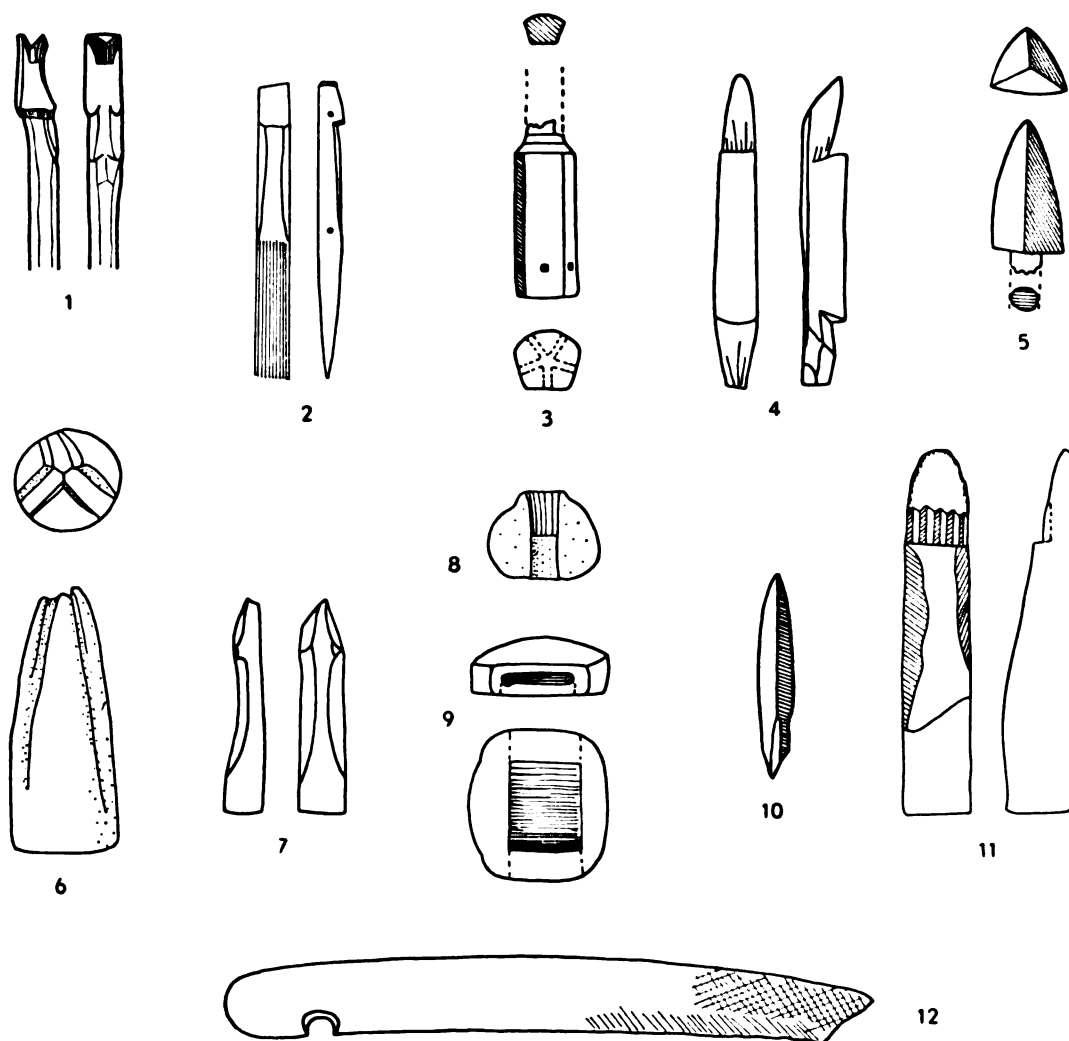


Fig. 5. Miscellaneous objects of wood, bone (10, 12), and pottery (8). Scale 1/2. 1. (A 8: I) P. 318: 18, 2. A. 8: I; 312, 3. A. 10: II; 9, 4. A. 8: II; 193, 5. A. 8: II D; 2, 6. A. 8: II; 184, 7. A. 8: II A; 45, 8. K. 13692: 1, 9. (K 779) P. 487: 2, 10. (A 1: I) P. 211: 2, 11. A. 3: 5, 12. (A 1: I) P. 418: 3.

In general the artefacts were found at unexpectedly high levels, mostly not below 1 m from the top surface of debris in the passage; some of the objects (not specified by Bergman) were even excavated in the layer with fallen bricks, earth, and straw from the roof. Charcoal occurred in several places, and practically everywhere there were bones of cattle and sheep.

Most of the wooden *kien* were found in Locality II. The eastern part of the latter, near to the exit, gives one the impression of a combined kitchen and workshop on account of the tools and household articles found near a burnt layer. Apart from the artefacts listed below, the following finds were observed here but left at the place: an iron cauldron (complete?), and two fragments from bases of earthenware vessels, one of them with steam-holes. Certainly not connected with the other finds from this site are several post-Han *tsa-tsas* of clay found at a very high level above Locality II.

Tabulated summary of antiquities:

(Omitted: the above-mentioned finds left behind in Locality II, and insignificant pegs and sticks)

	Approx. total of items in localities			
	I	II	III	IV
Wooden				
<i>kien</i> (c. 50)	x	main part	?	?
inscribed object	1	—	—	—
seal-cases, -tablets	—	4	—	—
spatula	—	1	—	—
measuring-rod (?)	—	1	—	—
carved pegs, one painted red . . .	3	—	—	—
shaped piece of board	1	—	—	—
Bone				
tip of composite bow	1	—	—	—
arrow-heads	1	1	—	—
sawn antelope horn	—	1	—	—
Grooved whetstone	—	1	—	—
Earthenware				
potsherds	5	—	—	2
ladle	—	1	—	—
handle of scoop	—	1	—	—
pellets	4	1	1	—
button-like ornament (?)	1	—	—	—
Plaster	1	—	—	—
Silk	1	—	—	—
Strings, one cord of horse-hair . . .	3	—	—	—

Locality I

A. 1: I:

1. Fragn. of earthenware jar with 4.5 cm high, straight rim, and bulging shoulder; cord-marked. Homogeneous, well-levigated, light blue-grey paste, hardness Mohs 5.0 — this type of paste so common in the collections will henceforth be referred to as "A-paste". Fig. 4: 2, and Pl. 3: 14
2. Fragn. of earthenware vessel, oblique cord-impressions, and annular scorings. Homogeneous grey paste of medium hardness (Mohs 5.0)
3. Small earthenware vessel with horizontally everted rim, plain, A-paste, hardness Mohs 5.0. Fig. 4: 5
4. Fragn. of unglazed stoneware vessel; outside, wavy and ribbed, inside, dark glossy lines from the potter's wheel. Homogeneous, well-levigated, blue-grey paste, hardness Mohs 7.0. Pl. 3: 13

P. 211:

1. Bronze arrow-head of the common Han type with triangular section (cf. e.g. Pl. 4: 1—5), largely, decayed. L. c. 32 mm

2. Bone arrow-head of same type as no. 1, the hexagonal base partly broken. L. 55, W. of sides 9.5 mm. Fig. 5: 10

3. Small piece of plaster from wall, white with a one cm broad, straight line painted in red colour
4. Fragn. of clay pellet
5. Small button-like piece of clay, probably part of ornament

P. 384:

4. Small piece of wood with semi-circular section, the flat side being coloured with red lead

P. 418:

2. Fragn. of nearly square wooden peg, one of the broader sides covered with Chinese writing, and one of the narrower sides incised with transverse lines in two groups of five in each, probably at irregular intervals. L. (19.5), Br. c. 2.7 cm
3. Fragn. of bone tip of a composite bow, consisting of a plate of about semi-circular section, slightly curved lengthwise. Rounded at one end, near which a nearly square notch is cut into the edge, and

broken off at the other end. The whole of the flat side and the inner portion of the vaulted side is covered with intersecting, fine, incised lines. Unique. L. (17.2), W. 1.5—2.0. Fig. 5:12, and Pl. 9:8

4. Fragm. of a shaped piece of board, with deep cuts in one edge, and near to this two pierced holes, one with inserted string. Size about 22×7.5 cm
5. Frs. of two 2-ply strings, one of hemp and the other prob. of woollen yarn

P. 419:

3. Fragm. of nearly square wooden peg, with a square head slightly tapering towards its top. (20.5)×1.9×1.6, head 3.4×2.3—3.0×2 cm
6. Square wooden peg, tapering towards a broken end. 10×2.2×2 cm

P. 431:

- 1-3. Three roughly shaped clay pellets. Diam. c. 2 cm
4. Fragm. of earthenware vessel with oblique cross-cord impressions. Blue-grey paste
7. Strings of veget. fibres, and a cord (?) of horse-hair
8. Piece of silk in a yellowish brown, probably natural, shade

Locality II

A. 1: II:

1. Earthenware ladle, roughly and a little irregularly shaped. Handle is straight, nearly square in section, and slightly curved outwards on back of the end. Pear-shaped bowl turned out a little from the handle. A-paste. Only complete specimens of its kind in the collections. L. 25, W. across bowl 10 cm. Pl. 1:4
2. Earthenware handle of scoop, bevelled into an octagonal section. Main part, nearest missing bowl, is straight, while end part is turned downwards at angle of 30°, thickened and finished off square, thus forming a hook. A-paste. (11)×3.6×2.5 cm. Pl. 1:5
3. Fragm. of whetstone with furrows, possibly for arrow-heads. Sandstone. 9×4.5×3 cm. Pl. 1:3

P. 169:

- 16-17. Two frs. of wooden seal-cases, very decayed, of the simplest type of this class of objects, henceforth referred to as type 1a (compare e.g. Pl. 14:2, 3). They consist of a short, rectangular plate with the short ends raised on one side; the cavity thus formed, opening to the longer edges, has received the seal-impressed clay. L. of no. 16 is 4.4 cm
19. Earthenware net-sinker, probably for bird-net, consisting of a nearly spool-shaped cylinder with longitudinal hole; this type is, henceforth, referred to as type A (cf. e.g. Pl. 17:11).

Through the hole a marginal cord of the net was passed, and the sinker was prevented from slipping by the vertical strings of the coarse-meshed net (cf. Pl. 17:13).

L. 3.6, diam. 1 cm

20. Wooden seal-case, with 3 saw-grooves across cavity, and a round, horizontal hole through one projection, on level with bottom of cavity. It is not stated whether the latter is open (type 1), or closed to the longer edges; seal-cases of the second form will, henceforth, be classed as type 2 (compare, for instance, Pl. 14:8). Badly shrunken. 4.6×3.3×1.6 cm
21. Bone arrow-head of square section, slightly decayed. L. (5.7), W. of sides 0.8 cm

P. 392:

1. Thin wooden tablet, possibly used for measuring (cross-piece of T-shaped carpenter's square ?), with a trapezoid depression across middle, and 5 transverse, incised lines on one of the longer edges. The six fields thus formed measure 2.4—2.4—2.3—2.3—2.3 and 2.5 cm. L. 14.3, Br. 1.6, Th. 0.6 cm. Fig. 18:6
2. Small wooden seal-tablet, of a type henceforth referred to as A 3 (cf. Fig. 12, and e.g. Pl. 14:17, 18, 22). Consists of a peg, roughly cut to rectangular section, having a nearly square depression cut across near one end, forming an open seal-cavity; the front slants towards the other end, which is thus wedge-shaped. Edges of front are chamfered. L. 7.5, Br. 1.5, Th. at top end 1.3 cm
3. Fragm. of wooden spatula, the larger portion of blade and part of handle remaining. L. (10.5), Br. 2.6 cm
5. Clay pellet. Diam. c. 2 cm
6. Fragm. of decayed, sawn-off antelope horn. 9×2.2 cm

Locality III

A. 1: III:

1. Bronze arrow-head of triangular section, partly split. Short, probably ground down to its actual length (25 mm) as the sides have the width (10 mm) common to this type of arrow-heads
2. Piece of rusty iron rod, possibly chisel (?). 9.3×1.5×0.5 cm. Pl. 5:9
3. Clay pellet, roughly shaped. Diam. 2.0—2.5 cm

Locality IV

P. 431:

5. Small fragm. from base of earthenware pot. Rather hard-burnt, though probably fired imperfectly as the colours were noted as grey (surfaces ?) and brickred (middle ?)
6. Small fragm. of earthenware bowl or dish, the neck being 2 cm high. Light grey paste

Temple Enclosure 1

South of the previous Han fort A 1, and situated at the same dried-out branch of the Oboin-gol, lie the remnants of a rather recent, walled temple called Kukchen-sume. The descriptions of this site, as given by Stein (*I.A.*, pp. 461—62) and Bergman (*Report*, p. 118), are incomplete, and no plan was ever drawn.

According to Stein, who never visited the place himself but reproduces statements from two of his assistants, the site ("E.G.") was enclosed by walls of stamped clay, measuring approximately 200 yards square; the interior contained a large ruin, the actual temple building, "besides numerous small structures". Outside the circumvallation there was a small ruined stupa, which yielded the main bulk of finds marked E.G. in the Stein collections.

According to Bergman, who visited the site on May 17th, 1930, and identified it as the "E.G. site", the enclosure contained only a few buildings — he does not mention an outer wall, and it is thus possible that the wall described by Muhammad Yāqūb was of more moderate dimensions than rendered above. The houses, or rooms, were built in the Chinese style. The small building (*bongkhong*), which Bergman describes as standing "just near the ruins", is almost certainly identical with Hasan Ākhūn's "stupa" outside the wall, as the finds reported and collected by those two investigators seem to be of very much the same character, and no other remains were observed situated at some distance from the main site. A *bongkhong* is used by the Mongols as a depository for their damaged or incomplete sacred texts, writings, etc.

The site, which according to both Stein and Bergman could not be very old (probably founded much later than the Si-Hia time), was destroyed by the Tungans in 1863.

At the temple Stein's surveyor Muhammad Yāqūb collected 3 architectural pottery pieces (E.G. 07 antefixa with dragon design, 08 fragm. of dragon's head, 09 ornamental brick), and a small wooden lacquered frame which probably had protected a painted panel (E.G. 011).

The main bulk of finds were made in the "ruined stupa" by Stein's head camel-man Hasan Ākhūn. They consist mainly of paper leaves containing Tibetan writing or print (about 200 being more or less complete) and Mongolian script (some 20 leaves only). Of textiles were found a painting on canvas (E.G. 02), silk from painting (E.G. 019. a. XVIII), and a fragment of woollen fabric. The wooden artefacts comprise a decorated board (E.G. 012), a "painted wood" (E.G. 010) which is, apparently, a portion of a barrel-shaped drum (cf. e.g. our Han fragment in Pl. 9:10), a small box or shrine (E.G. 0.6), and a turned bowl (E.G. 05).

The *bongkhong*, which is probably identical with the stupa, was excavated by Bergman and yielded the following kinds of objects: quantities of prints or writings on paper, in Tibetan, Sanskrit and Mongolian (all damaged or fragmentary), several kinds of *tsa-tsas*, fragments of *tangkas*, lacquered wood and rags. These objects were probably not catalogued as they are too modern to be of any great interest.

Stray find collected east of Monong-ellis

K. 13678. Bead of chalcedony, semi-translucent, flattened spherical. Diam. 14 mm

Temple 2

Near Baller, and on the eastern bank of the Oboin-gol, there is a small ruin of a temple called Kuku-sume (Kok-suma on Stein's map). It measures 13×14 m, the bearing of the longer sides being N 65° E, and has a gate in the southern side. The walls are of sun-burnt bricks in so-called

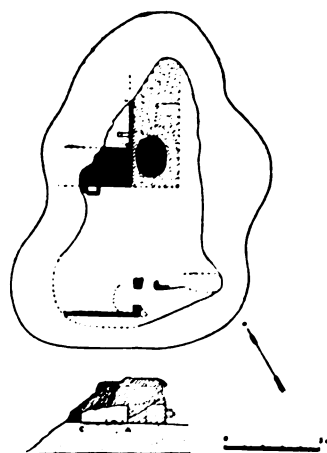


Fig. 6. Plan and section of Watch-station A 2 (Tsaghan-tsonch). Intersecting lines mark the base of a tower; hatching, walls of different kinds. Brick masonry. C—A is the white-washed wall of Locality I; the house remains are labelled Locality II.

Chinese bond, while the other parts of the structure were of fired bricks. Even before the temple had fallen into decay, it had been only temporarily inhabited by lamas. No artefacts were found here (See Bergman's *Report*, p. 121).

Stray find probably collected at a place near Kuku-sume

K. 13679. Semi-spherical bronze buckle, with transverse rod soldered on inside, on a level with the rim. Unique. Diam. 30, H. 14, Th. of material 1 mm

Watch-station A 2

Between Fort A 1 and the northernmost of the towers in the "Tsondol Limes" only one ancient ruin was known by the local Mongols. They called it Tsaghan-tsonch, a name or designation that recurs in connection with several watch-towers in the sequel, and simply means "The white tower". The white-washed remains of a watch-tower crown a mound, which is oblong and measures about 12×18 metres. Excavation showed that the tower and the adjoining structures were built on sand now 1.6 m above the surrounding ground, which consists mainly of gravel plains.

It appears from the Plan of this site, Fig. 6, that parts of the quarters adjoining the tower, together with the corresponding underlying parts of the swelling, have been cut away by erosion. This has so badly affected the remains that there is a certain amount of obscurity as to the nature of the site. There are, however, reasons to regard the ruin as only a small remainder of a rectangular (?) fortress or enclosure having a tower erected on the wall of its southern corner.

The walls, as well as the tower, are of bricks of the common Han size with a layer of reed between every third course of bricks. The following dimensions of bricks were noted: $37 \times 18 \times 11$, $? \times 17 \times 11$, $? \times 17 \times 18$, $? \times 17 \times 15$, and $? \times 17.5 \times 15$ cm. The walls of the inner corner are preserved to a height of 0.9 m, and plastered white; the floor of this room or house is covered with a layer of reed, smeared with mud, and filled up with a debris consisting of fallen bricks and straw for thatch — as was the case in the passage of Fort A 1. A low, rectangular postament (probably of mud) projects from the eastern wall and flanking its end there are two wooden sticks,

now about 30 cm in height, driven vertically into the ground. In the debris of this locality (I) were found some artefacts.

Attached to the outer side of the southern wall there is a peculiar, box-shaped shelf of bricks, according to the sketchy plan drawn by Bergman. A couple of sherds were collected somewhere along the base of the walls surrounding Locality I.

In the southernmost part of the mound a house was partially excavated. The white-washed walls of this room were decorated with one or several bordering (?) lines painted in red, which is a feature that recurs in several other rooms in Han structures. In the wall of the narrow entrance there are at one side two wooden posts, standing vertically and matching two thick ropes, built in vertically in the opposite wall. This Locality II yielded the main bulk of finds from the site, including the small number of inscribed wooden documents.

The artefacts comprise six wooden *kien*, a "stationery" slip, a seal-tablet with written address, a seal-case, a "face-peg", four clothes-hangers of wood (one of which has an inscribed base), and a few other wooden objects; further, a fragment of a whetstone, five unglazed potsherds, a piece of plaster from Locality II, fragments of silk, silk wadding, and ropes. A coarse wooden spatula (L. 24, W. 2—4 cm) was found in Locality I but left at the place.

List of antiquities:

Locality I

P. 357:

- 1-2. Two pieces of coarse ropes
3. Wooden "face-peg", consisting of a thick, rectangular tablet with the features of a face painted in black. $13.2 \times 2.8 \times 0.8$ cm
4. Wooden slip with bark remaining on the edges. This type of slip is regularly together with the thinner, better made inscribed slips, which constitute the vast majority of the *kien*, and must be interpreted as "stationery". $23 \times 1.5 \times 0.5$ cm
- 5-6. Insignificant wooden pegs

P. 385:

- 1-2. Two frs. of an earthenware vessel with 2 cm high, upright rim, and holes from earlier repair. Dark grey paste, grimy on outside. Diam. of mouth originally 16.4 cm. Fig. 4: 1

Outside of wall of Loc. I

P. 385:

4. Small fragm. from base of earthenware cooking pot with steam-holes. Grey paste
5. Small fragm. of earthenware vessel, brick-red paste tempered with sand

Locality II

A. 2:

1. Piece of plaster from the wall, white with a 3 cm broad line painted in red

P. 358:

1. Small, rectangular wooden peg with one end thickened and raised, slanting towards its top. This type of object occurs frequently in the Han ruins, in various sub-types, all henceforth characterized as "bolt-shaped"; many of them may have been used as door-bolts. $7.5 \times 2 \times 0.9$ —1.3 cm. Fig. 20: 13
11. Twig with one end cut into a tenon. L. 27.5, diam. 1.1 cm
12. Oblong wooden piece of rectangular section, part of some kind of construction (perhaps a box). Two parallel holes bored through from one long edge to the other, with one wooden dowel-pin (6 cm long) remaining. $27.5 \times 3.8 \times 1.8$ cm
- 13-15. A few pieces of silk in yellow and brown shades
16. Silk wadding

P. 385:

3. Fragm. of earthenware vessel, dark blue-grey paste, the inner surface having close, slightly impressed small ovals in a darker, prob. glossy, shade of grey (cf. Pl. 2: 4)

P. 393:

1. Oblong wooden hook, probably clothes-hanger for insertion into a wall. One end cut into a hook with chamfered edges, the main part straight and rectangular. The latter is, strangely enough, inscribed with Chinese characters on

both broad-sides. 15.4×1.6 — 3.8×1.5 cm.
Fig. 19: 2

2. Ditto, of about the same form as no. 1. Painted black on hook and neck (no writing).
L. 16.8, Th. 1.4 cm
3. Ditto, with neck part of same width as main part. Painted black on hook and "neck".
L. 13.5, Th. 1.7 cm. Fig. 19: 1
4. Ditto, of same form as no. 3. The "neck" painted red and black. L. 12.5, Th. 1.9 cm
5. Wooden seal-tablet of type B 2, with frs. of

strings remaining in the saw-grooves across cavity which has an accidental (?) hole through its bottom. Written address on front.
 $12.1 \times 3.7 \times 1$ —0.4 cm

P. 432:

1. Wooden seal-case of type 1 or 2 with three saw-grooves across cavity. $5.2 \times 3.5 \times 1.7$ cm
- 2-4. Three small wooden prisms
5. Fragm. of rectangular whetstone.
Br. 3, Th. 1.9 cm

ANCIENT REMAINS WEST OF THE IKHEN-GOL AND ALONG THE ONTSEIN-GOL

The vast majority of the ruins between the two southern oases and the delta north of Tsondol are situated on the eastern side of the main river. The exceptions are two lines of ancient watch-stations to be found west of the Ikhen-gol, i.e. the northern part of the Edsen-gol. This western region is characterized by immense sterile gravel plains, enlivened only when, and where, water reaches the shallow river-beds of the Narin-köl and the Mören-gol.

By far the most important is the line of 26 badly decayed watch-towers and one fortress, which was called the "Tsondol Limes" by Bergman, and stretches in a slight curve from the tracts of Dash-obo to the neighbourhood of Butu-burukh, between the Ikhen-gol and the Narin-köl. The total distance of this line is about 40 km, and the sites are separated from each other by almost regular intervals of about 1,300 metres. A low, scarcely visible remnant of a double gravel rampart runs closely to the west of the towers. Most of the ruins were not examined thoroughly, and only seven yielded finds (A 3—A 9), a circumstance which is perhaps compensated for by the extraordinary abundance of wooden documents and other artefacts from one of these sites, the fortress Mūdurbeljin with adjoining quarters (A 8). The period of construction as well as that of occupation seems to coincide mainly with the Western Han dynasty, judging from the finds and certain architectural features.

The second line of ancient defences runs west of the Tsondol Limes, and between the Narin-köl and the Mören-gol. The northernmost of its 5 watch-towers is situated on about the same latitude as Baller, the southernmost one near the Western Temple at the Mören-gol. This line differs from the Tsondol Limes in the great distance between the towers, the absence of a Limes rampart, and the mode of construction of the buildings. Three of these latter were examined by Bergman who did not collect any artefacts, though he observed pottery fragments of Sung or Yüan types at Tower 27.

THE TSONDOL LIMES

Bergman found no traces of ruined towers which in the north might have connected this line with the ruins A 1, A 2, and the line of towers at Wayen-torei, or in the south with the Limes of the Mesa Area and thus might have formed an unbroken defensive girdle around the Khara-khoto region, the eastern side being a "wet border" formed by the East Lake Etsina. This does not exclude the possibility of such a line having existed and having been eroded away in the vegetation belts of the delta and main river, or of such defences having been planned but never constructed.

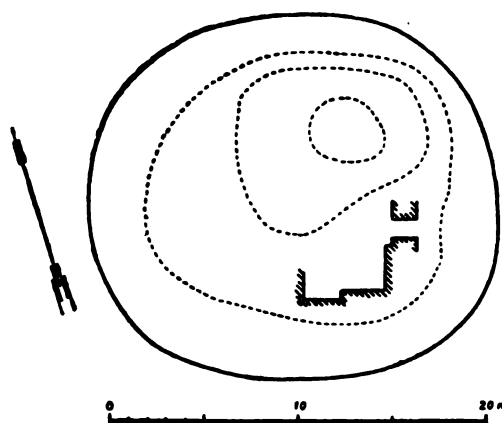


Fig. 7. Plan of Watch-tower A 3 with excavated portions of the quarters.

Bergman had no opportunity of making a thorough examination of all the ruins in the Tsondol Limes. In June, 1930, before the exploration of the Edsen-gol region had seriously started, he made a mapping tour from the delta in the north to Mao-mu in the south along the main river. On this tour he followed the line of towers, sketched the contours of all the ruined mounds and made reconnaissance diggings. All this took about one week. Six months later he visited the Tsondol Limes for the second time, but then only examined two ruins, the remains of the Mudurbeljin fort and the watch-tower immediately north of it. Bergman saw the line of towers for the last time in 1934 on the motor expedition to Sinkiang, when he crossed the defences at Mudurbeljin. He was then prohibited from making archaeological excavations.

The following ruins form part of the Tsondol Limes beginning from the north.

Watch-tower 3 is now eroded into a mound about 1.75 m high, crowned by a cubical *obo* (or *bongkhong*?).

Watch-tower 4 is probably identical with the highest part (3 m above the ground) at the southern end of a mound. The nearly rectangular shape of the latter exposes clearly the quarters of this watch-post.

Watch-tower 5 consists of a nearly square mound shaped like a sand-dune owing to the action of western winds. The highest part, in the NE corner, is about 3 m high.

Watch-tower A 3

is the 4th ruin from the north in this line and is eroded into a circular mound very much resembling a sand-dune. The diameter is 20 m, and the highest part rises to about 4 m above the ground in the NE corner. To the north, somewhere between this and the previous ruin, Bergman encountered the practically effaced Limes rampart for the first time. Southwards, the rampart, with few interruptions, continues to run on the western side of the towers — it is perhaps best preserved at Tower 14 below. The plan of the present site is shown in Fig. 7.

A trial excavation of the lower SE part of the mound revealed the existence of a room bounded by white-plastered brick walls about 1 m high, their thickness varying between 1.3 and 1.8 m. A 1 metre wide gate faced east, and across this passage, on the inner part nearest to the room, lay two roughly shaped wooden boughs forming part of a door-post. At the opposite part of the passage,

just inside the orifice, there was a black-painted, vertical line on the white wall, and the walls of the room had been decorated with black and red (horizontal ?) lines. The following measurements of bricks were noted: $29 \times 18.5 \times 12$, $38 \times 19.5 \times 11$, $? \times 17 \times 13$, $? \times 19 \times 11$, and $? \times 20 \times 13.5$ cm.

The finds were obtained in the room near the floor, the level of which is 80 cm below the two boughs in the passage. They consisted of 4 *kien* and other wooden objects, a small potsherd, a fragment of a socketed iron tool, an ear of wheat (?), and fragments of textiles. In addition, a knife-shaped wooden object of some size was found here but left behind.

List of antiquities:

A. 3:

1. Base of largish hair-brush, made of four identical wooden segments held together by fibres near the end. The brush-hairs are wrapped with fibres and inserted into a square socket; they end 2.6 cm from the opening. The socket gradually narrows into the wood, ending 4.6 cm from the opening. Some of the fibres holding the segments together are twined into strings, and the fastening is placed in two notches cut all round. Black paint on the outer side and in the whole of the socket indicates that the brush was probably used for painting in black. L. (5.3), diam. 1.3 cm. Fig. 8.



Fig. 8. Base of a coarse brush, A. 3: 1, probably used for painting. Scale 1/2.

2. Small wooden prism with one conical end, which is painted black. $4 \times 1.4 \times 1.3$ cm
3. Ditto with a rounded head tapering towards the end. Painted black. $3.6 \times 1.6 \times 1.3$ cm
4. Fragm. of "female" fire-stick, which has had at least four holes. L. (7.6), Th. 2.3 cm. Fig. 20:9

5. Wedge-shaped wooden object, the thin end consisting of an offset with five sharply cut "folds" at the inner part. $9.7 \times 1.9 \times 1.9$ cm. Fig. 5: 11
6. Wooden wedge, $10.2 \times 3.5 \times 1.5$ cm
7. Fragm. of wooden peg, shaped like a spatula. L. (11), Th. 0.8 cm
8. Fragm. of square wooden peg with wedge-shaped end. L. 10.5 cm
- 9-11. Round wooden pegs, pointed at one end. No. 11 has a needle-like point issuing from the narrow end
- 12-14. Wooden slips. No. 14 has a short, pointed tenon at one end, and is roughly rounded at the other end
15. Wooden spatula-shaped piece of board, pointed and thick at one end, parabolic and thin at the other end. $20.8 \times 3.2 \times 0.7$ cm
16. Small earthenware sherd with a hole drilled through. A-paste. Hardness Mohs 5.0, Th. 0.6 cm
17. Fragm. of socketed iron rod with triangular section, possibly a cutting implement. Socket contains decayed remains of a wooden handle of the corresponding section, of about even width but becoming thinner towards the broader end of the rod
18. Piece of plaster from wall, with white ground decorated with black and red lines, very much faded
19. Ear of wheat (?)
20. 1-5. Frs. of sky blue, pale blue and brownish natural silk sewn together, two sewn bands of buff silk, silk wadding, fragm. of greyish black veget. cloth, and a cord of veget. fibre (see Sylwan 1949, p. 26)

Watch-tower A 4

The 5th tower from the north in the Limes is now, together with its adjoining quarters, eroded into an evenly rounded mound about 2.5 m high. On the southern side is a low promontory, probably marking the remains of a room. A trial excavation revealed brick walls in the central and northern parts of the mound.

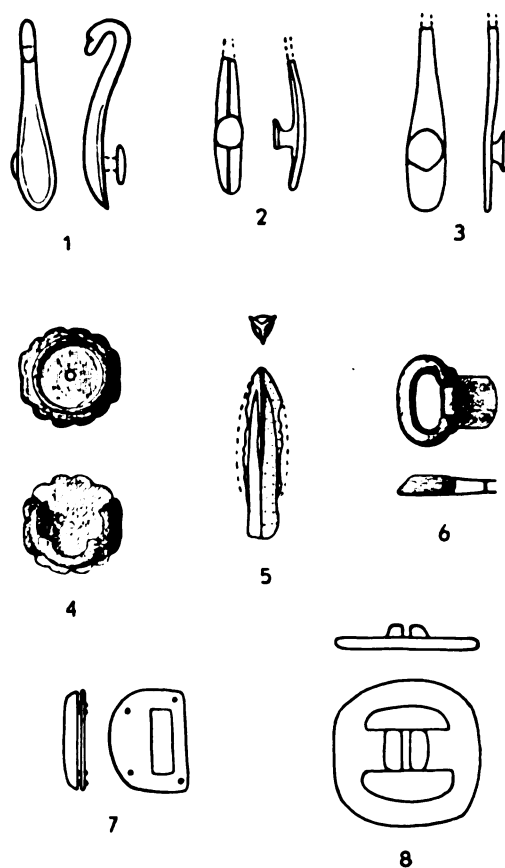


Fig. 9. Bronze dress-hooks, buckles, and triangular-sectioned arrow-head. Specimen 8, from a drawing by F. Bergman, is not described in a list. Scale 1/2.
1. A. 4: 1, 2. K. 13759: 7, 3. A. 8: I; 455, 4. K. 13753: 2, 5. K. 13710: 19,
6. K. 13789: 13, 7. K. 13789: 11, 8. (K 718) P. 294: 3.

Near the northern edge, and close to a wall, the small dress-hook described below was found. It is covered with a beautiful patina in dark green and bluish green shades. Further, a well-preserved *Wu-shu* coin was picked up from the black gravel surface of the ground near the tower but was later lost; it had the typical "desert patina", i.e. smooth and dark brown.

A. 4: 1. Small bronze belt-hook of semi-circular section, curved up and bent backwards at its tip to form a hook, now broken, ending in a stylized bird's head. Beneath flat under-side at broader end there projects a stud for attachment to belt or garment. A ridge along the border of the broader part is made by the mould and not polished away. Corroded. Only complete specimen of this class in the collections. L. 5, W. 1 cm. Fig. 9: 1, and Pl. 4: 12

Watch-tower 6 is part of a nearly round mound which resembles a sand-dune. Greatest height is about 3 m.

Watch-tower 7 is a somewhat rounded mound, about 2.5 m high.

Watch-tower 8 is a nearly square mound, its height being 3 or 4 m.

Watch-tower 9 is shaped like the preceding mound and is about 3.5 m high. A trial excavation revealed the brick walls of a tower. Between each course of bricks a layer of straw was laid, the straws lying parallel to each other in every layer but perpendicular to the layer below and

above. Some low wooden poles were sticking out of the masonry. From the sketch of the contours one may conclude that there are some other buildings near the tower proper.

Watch-tower A 5

The 10th tower from the north is part of a mound of somewhat irregular shape, the profile resembling that of a sand-dune. It is about 3 m high. "Potsherds" were observed on the ground, and near the tower proper the following coin was picked up.

A. 5:1. Chinese copper coin, *Wu-shu*, well preserved with typical desert patina. Diam. 25.5 mm. Pl. 4:6

Watch-tower 10 consists of a nearly round mound, about 3 m high. "Potsherds" were seen on the ground.

Watch-tower 11 is a nearly square mound, 12—13 m wide and about 4.5 m high at its highest part in the NE corner; the mound may have got its outline from a square enclosure. Bergman left a note, in which he expressed his intention of making further investigations here; this plan was never carried out but ranks this ruin among the more promising ones for future excavations. The finds of the following tower may derive from here.

Watch-tower A 6

The 13th tower from the north is now part of a mound with one side straight, the other sides rounded, and with a promontory on the southern end probably marking a small enclosure or room. The tower is in the middle of the mound proper, and rises to about 4 m. Some poles remain sticking vertically out of the masonry.

The finds were collected by a Tsondol Mongol without proper diggings, and according to a note by Bergman they could very well derive from the preceding tower. The artefacts consist of 6 wooden *kien*, a wooden seal-tablet with written address, two wooden "face-pegs", two labels of wood, a seal-impression in clay, a few iron plates and rods, and textiles.

List of antiquities:

A. 6:

1. Seal-impression in clay, fragmentary, with three hemp strings, one of which has a loop, still attached. The four characters are in good condition and read: *Ts'ing Yen cha yin*, "Ts'ing Yen's seal of letters". The back is flat and has a groove at right angles to the strings running across the front; this groove is certainly the impression of a diminutive pin, wedged lengthwise on bottom of cavity of seal-cases of type 1 b. Size of whole object 4.7×4 , of impression 1.5×1.5 cm. Pl. 17:7
- 2-3. 1-3. Fragn. of fine open silk overlaid with black lac; silk wadding; fine strand of red grass (?) (see Sylwan 1949, p. 26)
- 4-5. Two arrow-head shaped objects, made of iron plate, almost identical. One half lanceolate and vaulted, and has a pair of small, round holes pierced through near middle of one edge. The other half twisted into an almost solid rod of about round section. L. 10 and 10.8, W. of pointed part c. 1.7, of "handle" c. 0.6, Th. of plate 0.05 cm. No. 5, Fig. 10:6
6. Ditto, the rod-handle being bent at right angles to the blade, and having a string inserted. The holes are near the opposite edge as compared with the previous ones. L. (if straight) 12.8 cm
7. Pin made of twisted iron plate, bent at right angles. The plate has been pierced with two round holes as in nos. 4—6, which probably shows that all four objects were formed of condemned articles (laminae from coat of mail ?). L. (if straight) 12.3 cm
8. Iron lamina from coat of mail, consisting of a thin rectangular plate with 8 small, round holes in groups of two near each edge. Deformed into a tube, L. 4.8, diam. c. 1.2 cm. W. when straightened 4 cm. Fig. 10:2
9. Two objects of iron plate, probably made of condemned laminae from coat of mail, attached to each other by a coarse hemp cord at a

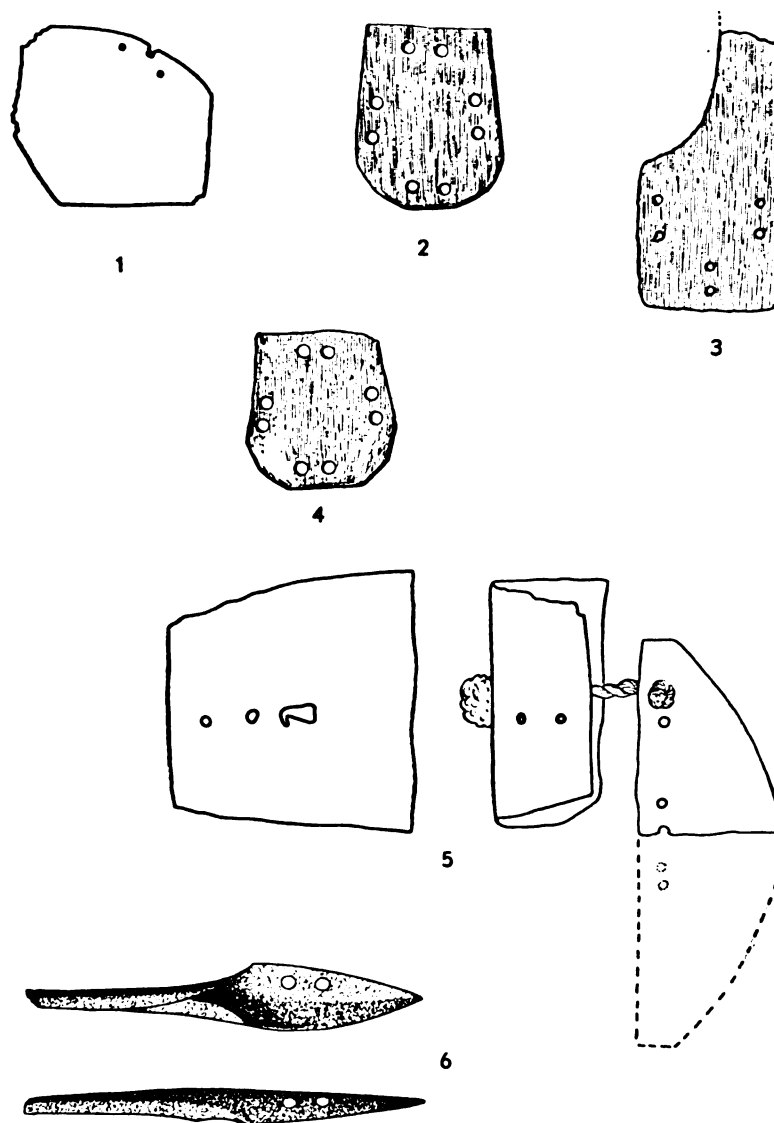


Fig. 10. Laminæ from coats of mail found in Han ruins. Iron, and bronze (1). Specimens 2, 5, 6 were deformed into various objects. Scale 1/2. 1. A. 8: I; 457, 2. A. 6: 8, 3. A. 10: II; 28, 4. A. 10: I; 86, 5. A. 6: 9, 6. A. 6: 5.

distance of about 2 cm. The larger object consists of a roughly trapezoid plate, bent into a tube open at one side; there are two round holes and an irregular gap in the middle, the latter opening receiving the cord. The smaller piece is flat, being apparently one half of a D-shaped lamina, and having two pairs of small, round holes near the straight edge; through one of these holes the cord passes. Traces of black lacquer on outside of the tube and on one side of the flat piece; the latter shows traces of red lacquer on its other side. Size of tube $6.5 \times 3 \times 2$ cm, when straightened 7×6.5 cm; of flat piece $(5.2) \times 3.7$ cm. Fig. 10: 5

P. 166:

1. Wooden seal-tablet of type B 3, with written address on the lower part of the front. Bottom of cavity ridged at right angles to the three grooves; in these latter there are frs. of strings. Well preserved. $10.9 \times 3.7 \times 1.9-0.7$ cm
2. Wooden "face-peg" consisting of a rather thick tablet, with pointed lower end. Faded painting. $18 \times 3.3 \times 0.6$ cm
3. Ditto, with better preserved painting in red and, partially, in black. $17.6 \times 3.1 \times 0.5$ cm. Fig. 21: 2
- 6-7. Two small wooden pendent labels, consisting of short slips with a pair of notches at one end

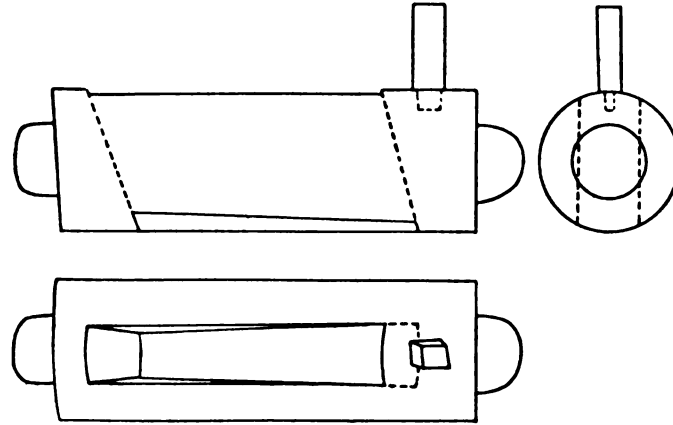


Fig. 11. Wooden turning piece of some kind of revolving appliance
(cf. Pl. 9: 13). A. 7: 1, Pl. 9: 12. Scale 1/4.

Watch-tower 12 is part of a rounded mound which in profile resembles a sand-dune. Its height amounts to about 3 m. The remains of the actual tower contain bricks with a layer of straw between every second course of bricks.

Watch-tower 13 rises above a nearly oval mound, and is about 3.5 m high.

Watch-tower A 7

The 16th tower from the north is embedded in a rather irregularly shaped mound. It has sand-stone slabs on the top, and is about 3.5 m high. A trial excavation uncovered a room on the southern side of the actual tower, with three steps of a brick staircase leading up to the top (as is the case, for instance, at Boro-tsonch).

The finds were made at the base of the staircase and consist of 9 wooden *kien*, one "stationery" slip, two wooden seal-tablets with writing, two seal-cases, a face-peg shaped object of wood with writing, possibly a spatula, and a few other wooden objects.

List of antiquities:

A. 7:

1. Large wooden cylinder-shaped object with a 2 cm long pivot cut in each end for revolving in a frame (cf. A 32: A; 46—48, Pl. 9: 13). To one side opens an obliquely cut, rectangular cavity which is 15 cm long, 3 cm broad and c. 4 cm deep. A rectangular tenon (L. 4.6 cm) is inserted between cavity and one pivot, perpendicular to the main axis, and fitted with cloth. Full L. (with pivots) 27, diam. 7 cm. Fig. 11, and Pl. 9: 12
2. Wooden peg with square section, with four small notches in the edges at one end, at the other end strongly decayed. 19 × 2 × 1.8 cm
3. Square wooden block with a tenon at one end, cut in one; clay-wash, especially on tenon and offset. Full L. 8.5, size of block 4.8 × 3.8 × 2.8, of tenon 3.7 × 2.5 × 1.1 cm

- 4-5. Two wooden seal-cases of type 1 b, 4.7 × 3.8 × 1.3, and 4.9 × 3.3 × 1.1 cm. No. 4, Pl. 14: 4
6. End of bolt-shaped wooden peg, roughly cut. L. (5.5), W. 1.2, Th. of head 1.9 cm
7. Fragm. of wooden "stationery" slip. (8) × 1 × 0.3 cm

P. 16:

1. Pointed peg, of similar shape to some varieties of "face-pegs", with a few indistinct Chinese characters. 24.5 × 2.1 × 0.9 cm
7. Wooden seal-tablet of type B 1, with writing. Strongly decayed with a hole made through bottom of cavity. 12.1 × 3.8 × 0.4 cm
9. Wooden seal-tablet of type A 1, with traces of writing. W. 2.7, Th. 1.1 and 0.3 cm
13. Spatula-shaped wooden object, with a round hole bored through the rounded handle, and with traces of either writing or black paint. L. 8.2, W. at blade 2.3 cm

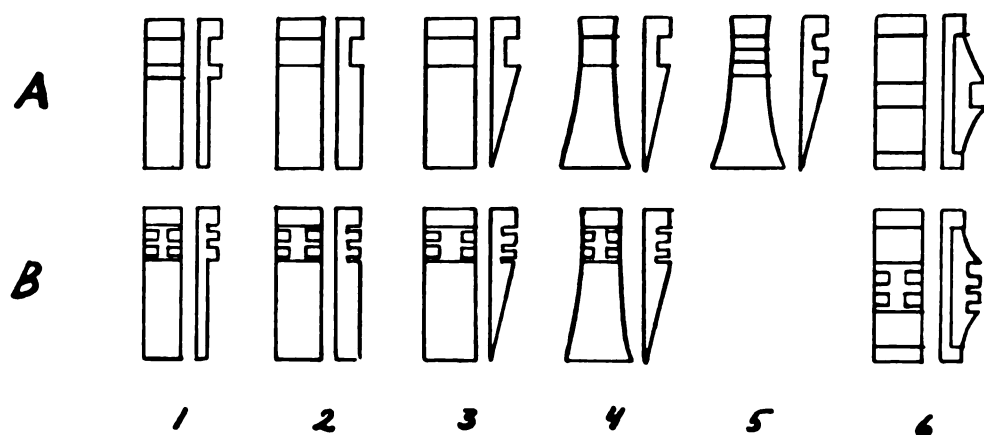


Fig. 12. The regular types of wooden seal-tablets found in Han ruins of the Edsen-gol region.

Fort A 8

Mu-durbeljin, "The Poor Fortress", yielded the richest finds of all the localities excavated by Bergman. No fewer than about 5,200 complete or fragmentary Han *kien* were collected here, out of a total of about 10,000 from the whole Edsen-gol region, and more than 1,230 items of other artefacts. A plan of the site is shown in Fig. 13.

The vast majority of the finds derive, to be sure, not from the fort proper but from its immediate surroundings, particularly three mounds which seem to have been plain repositories or rubbish heaps. The walled square of the fort yielded no finds, but about 115 objects, and 1,495 wooden *kien*, were collected at two spots in a rampart enclosure which joins the former structure.

The walled quadrangle is about 15 m square, and is, accordingly, one of the smallest of its kind in the Edsen-gol region. The walls are of very decayed bricks with a layer of reeds between every third course; they are about 2 m thick and at present 4—4.5 m high on the outside and about 2 m on the inside. There are cones of debris on both sides and the surface of the ground inside the quadrangle is entirely covered with debris. The gate is near the SE corner of the south wall and leads to an enclosure, 39×41 m, on the south side of the walled quadrangle. This enclosure consists of low ramparts, 1 m high and 10 m broad, on a line with the west and south walls of the walled quadrangle; its gate is near the SE corner of the east face and is protected by a wall set at an angle or possibly a gatehouse. (Bergman's investigations were concentrated on digging for finds and thus architectonic details were not given primary consideration and a more exact description of the rampart, etc., cannot be given. The entire fortification resembles, in a way, Fort A 24, Bagha-durbeljin, on the central part of the Edsen-gol.) The diggings were made in the eastern and western parts of the rampart (Localities III and IV).

Immediately outside the enclosure, some 15—20 metres to the SE and E, there are three rounded mounds of varying size; they are fairly low and covered with black gravel. The excavations, carried out by Wang, Chin and some of the Mongols under Bergman's supervision, gave disappointing results in the matter of building remains: no walls and only a few burnt bricks were found in the central mound (Locality I), and in the largest mound, to the north of the former, only a brick house wall 8 m long and traces of a straw-thatched roof and a clay floor (Locality II). These two localities

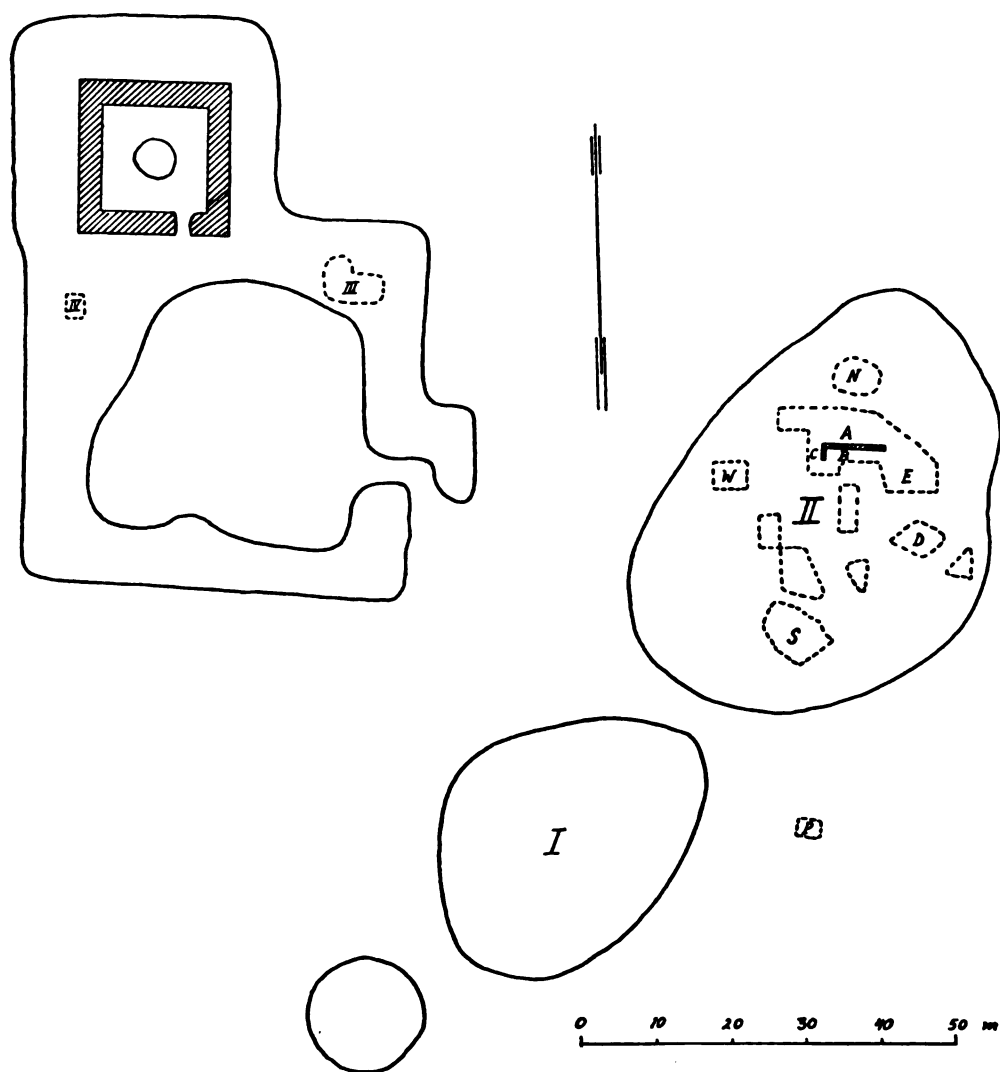


Fig. 13. Plan of Mu-durbeljin (A 8) showing the fort with a much eroded rampart, and digging localities I—IV.

yielded, however, the main bulk of the collections from this site, together more than 1,100 items, besides *kien* to a number of 1,871 and 1,850 respectively.

A small test pit (P) was dug east of and near the central mound, and it yielded a few wooden objects. While the small southernmost mound gave no finds or architectonic remains, due perhaps to a mere superficial investigation, some potsherds of Han type were collected from the gravel surface.

The excavation took place between December 27, 1930, and January 25, 1931. The work was often interrupted by cold weather and strong winds, sometimes for a whole day; during most of the time spent at Mu-durbeljin there were only 3—4 hours of digging every day.

Below will be found a more detailed description of the various digging localities and their pits, arranged in a sequence corresponding to that of the List of antiquities.

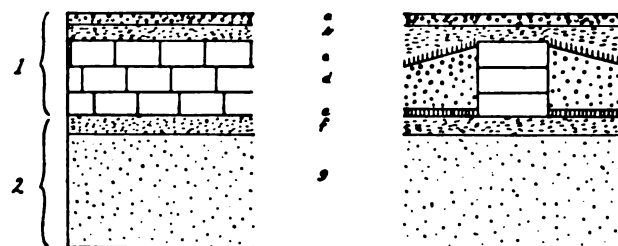


Fig. 14. Mu-durbeljin: Sections of digging localities II A and B. Artefacts were found in both strata, on each side of the brick wall. Upper stratum (1): a. gravel, b. straw, c. hard clay mixed with reeds (roof), d. burnt finds, e. stamped clay (floor). Lower stratum (2): f. straw, g. earth with slightly burnt finds. Scale 1/40.

Locality I

consists of an almost oval mound, 30 m in diam., H. 1.2 m. The depth of the culture layers is 1.1 m, i.e. almost the same as the height of the mound. Beneath a thin layer of gravel lie five layers consisting respectively of soot and ash, burnt straw mixed with fine gravel, sand mixed with ash, straw, and an insignificant burnt layer in sand. The layers are not entire throughout the whole mound.

The diggings were carried out unsystematically, and thus no separate pits were distinguished. In addition to the large quantities of *kien*, about 525 other items were collected in this central mound which is, consequently, the richest single digging locality of all those hitherto excavated in the Edsen-gol region. The finds were made in all the layers; most of them were objects of wood, metal objects being very few in number and pottery almost non-existent owing to the destructive action of frost here.

Test pit P, which yielded three wooden objects, lacks any description.

Locality II

is a large, elongated mound, slightly lower than Locality I, with which it may have been connected, although a small rain-water furrow now divides the two; the culture layers almost meet. At first the digging was unsystematic, as the Mongols dug a pit here and a pit there without always getting to the bottom (= "Locality II", only, in the List of antiquities below). But after a brick wall had been found, the pits were numbered (A—E, and W, N, S).

Locality II, pits A, B and C

The find-places immediately N, S and W of the brick wall were labelled A, B and C. The culture layers measured 135 cm in depth in the case of A and B. As seen from Fig. 14, a wall only three brick courses high had been erected on an older culture layer of straw and earth with slightly burnt remains. This lower layer yielded about seventy artefacts, which in the catalogue are kept separate from the finds of the upper layer, and some scattered pieces of bluish grey, burnt brick, which were left behind. On each side of the wall and on top of the layer of straw there was a floor of stamped clay, after which came a thick burnt layer with finds and, finally, the remains of a roof. This consisted of a layer of hard, partially burnt clay mixed with reeds, and a top layer of straw. Judging by all appearances, the E—W section of the wall had once been a dividing wall in the building. At locality II A and right up against the north face of the wall, lay the skeletons of five or six wolves or dogs in a confused heap. The finds from this upper level

of pit A are very much more numerous than would appear from the catalogue, as the finds first uncovered here were not kept separate from others in this mound, being put together with these under the general heading of "Locality II". No notes were made about the conditions on the outer side of the transverse wall, pit C.

Locality II, pit D

Near the eastern edge of the mound the ground was dug to a depth of about 70 cm. On the surface there is a burnt layer, 10 cm thick, after which comes earth mixed with ash and some straw. All the wooden objects from this site are dark brown in colour, in all probability caused by the proximity to subsoil water.

Locality II, pit E

Find-place immediately east of the wall, excavated to a depth of 90 cm. The topmost layer consists of stamped clay on a thin bed of straw, after which come deep burnt layers and a final layer of earth with a little ash.

Locality II, pit W

No information is available about this find-place at the western edge of the mound.

Locality II, pit N

This pit was dug to a depth of 50 cm, after which the work was suspended without the bottom of the sequence of culture layers being reached. The layer that was dug consisted of tightly packed straw, in which quite good finds of wooden *kien* and other objects were made.

Locality II, pit S

When the finds at Locality I began to diminish, Wang moved over to the south part of Locality II and dug pit II S. Two levels were uncovered, each 40 cm deep. The upper level (S 1) comprised thick burnt layers and a layer of straw intermingled with greatly weathered potsherds, especially near the surface. No information is available about the lower level (S 2). The finds from the two levels are kept separate in the catalogue.

Locality III

Excavated inside the rampart enclosure and in its NE corner. No unmistakable remains of walls could be discerned and distinct burnt layers occurred only near the surface.

Locality IV

Excavated in the west side of the rampart enclosure which is here, too, in a poor state of preservation. Apart from heaps of dry *argal*, which were also abundant at the other digging localities, the only finds were half a dozen inscribed wooden slats; this locality will not, therefore, be found in the List of antiquities below.

Surface finds A. 8: 1—9 may have been gathered in a variety of places in the immediate surroundings, to our knowledge.

Some specimens are not described in the list; they are, however, shown in Figs. 17—20, 22.

Many of the *kien* were dated, errors excepted, within a period between 81 B.C. and A.D. 25. In fact, the whole collection, of finds from this site shows us a secluded Han settlement most probably without intrusive elements from later periods, in contrast to e.g. A 35 and a few other A-marked sites that were occupied after the end of the Han dynasty.

Tabulated summary of antiquities:

	Approx. total of items in localities:												
	I	P	II	A	B	C	D	E	W	N	S	III	Surf.
<i>Wu-shu</i> coins (c. 24)	13	—	3	1	—	—	—	—	—	—	1	4	—
<i>Ta-ts'üan-wu-shi</i> coin	—	—	1	—	—	—	—	—	—	—	—	—	—
Wooden													
“stationery” slips	31	—	6	2	—	—	—	—	5	—	—	51	—
inscribed “objects”	2	—	1	1	—	—	—	—	—	—	1	—	—
seal-cases, -tablets, tallies	138	1	74	35	—	4	3	10	3	3	22	18	—
labels	15	—	7	—	—	—	—	—	—	1	—	—	—
complete writing brush (P. 1:1)	—	—	—	—	—	—	—	—	—	—	1	—	—
dice and similar prisms	4	—	6	2	—	—	—	—	—	1	3	—	—
small sculpture of duck	1	—	—	—	—	—	—	—	—	—	—	—	—
“face-pegs”	9	—	8	8	1	—	—	3	—	2	—	4	—
ornamental pieces	1	—	2	—	—	—	3	—	—	1	1	—	—
combs	4	—	4	3	—	—	—	—	3	—	1	2	—
comb-like implements	1	—	—	—	—	—	—	—	—	—	1	—	—
bowls cut in one, compl. and fragmentary	20	—	13	1	—	1	1	1	4	—	7	1	—
fr. dish	—	—	—	1	—	—	—	—	—	—	—	—	—
fr. bucket	1	—	—	—	—	1	—	—	—	—	—	1	—
circular lids of bottles, etc.	—	—	1	—	—	—	—	—	—	—	—	—	—
discs, mostly bottoms of containers	5	—	1	—	—	—	—	—	—	—	—	—	—
D-shaped handle	—	—	—	—	—	—	—	1	—	—	—	—	—
containers made of a pane	—	—	1	1	—	—	—	—	—	—	—	—	—
ladles	1	—	1	1	—	—	1	—	—	—	—	—	—
spatulas, spatula-shaped frs.	30	2	17	6	—	1	1	3	—	1	9	1	—
chopsticks, and similar sticks	13	—	—	2	—	—	—	—	—	—	—	6	—
“female” fire-stick	1	—	—	—	—	—	—	—	—	—	—	—	—
legs of food-trays	1	—	1	—	—	—	1	—	—	—	—	—	—
one part of X-shaped stand	1	—	—	—	—	—	—	—	—	—	—	—	—
knife-sheath	—	—	—	—	—	—	—	—	—	—	—	1	—
knife-shaped implements	1	—	1	2	—	—	—	—	—	—	—	—	—
beater wrapped with cloth	1	—	—	—	—	—	—	—	—	—	—	—	—
small L-shaped hammer	—	—	1	—	—	—	—	—	—	—	—	—	—
club-head	—	—	1	—	—	—	—	—	—	—	—	—	—
head for socketed adze or hoe-blade	—	—	1	—	—	—	—	—	—	—	—	—	—
handle of fox-tail saw	—	—	—	—	—	—	—	—	—	—	1	—	—
cleats, rods	1	—	1	—	—	—	—	—	—	1	—	—	—
wedges, wedge-shaped objects	7	—	3	—	—	—	—	—	—	—	1	—	—
X-shaped dowel	—	—	—	—	—	—	—	—	—	1	—	—	—
measuring sticks	—	—	1	—	—	—	—	—	—	1	—	—	—
slats with incised lines at intervals across	2	—	—	—	—	—	—	—	—	—	—	—	—
crescent-shaped swivel	—	—	1	—	—	—	—	—	—	—	—	—	—
split peg with hairs	1	—	—	—	—	—	—	—	—	—	—	—	—
split standing tablet, cut in one	—	—	—	—	—	1	—	—	—	—	—	—	—
door-bolt sticking in part of frame	—	—	1	—	—	—	—	—	—	—	—	—	—

	Approx. total of items in localities:												
	I	P	II	A	B	C	D	E	W	N	S	III	Surf.
"bolt-shaped" pegs	10	—	9	—	—	—	3	3	—	2	10	—	—
"clothes-hangers"	—	—	4	—	—	—	—	—	—	—	—	—	—
lacquered lamella	—	—	1	—	—	—	—	—	—	—	—	—	—
various objects and refuse	134	—	57	27	—	3	3	7	3	9	18	16	—
Bamboo													
tubes	1	—	—	—	—	1	—	—	—	—	—	—	—
tube segments	—	—	—	—	—	—	—	—	—	2	1	1	—
spatulas	—	—	—	—	—	—	—	—	1	—	—	—	—
chopsticks	14	—	3	1	—	—	—	—	—	—	5	—	—
other round sticks	9	—	4	—	—	—	—	—	—	—	—	—	—
"tooth-picks"	8	—	—	—	—	—	2	—	—	1	—	—	—
labels	—	—	2	—	—	—	—	—	—	—	—	—	—
narrow comb	—	—	—	—	—	—	—	—	—	1	—	—	—
wedge	—	—	—	—	—	—	—	—	—	—	1	—	—
various, partly shaped, pegs, sticks, slats	21	—	5	1	—	—	1	4	1	4	5	4	—
Cane basket	—	—	1	—	—	—	—	—	—	—	—	—	—
Gourd													
fr. of ladle	—	—	—	—	—	—	—	—	—	—	—	1	—
frs. of vessels	1	—	—	1	—	—	—	—	—	—	—	—	—
Horn objects, partly shaped	1	—	1	1	—	—	—	—	—	—	—	—	—
Glass ornament	1	—	—	—	—	—	—	—	—	—	—	—	—
Chalcedony, piece of	—	—	—	—	—	—	—	—	—	—	—	1	—
Clay and pottery													
seal-impression	1	—	—	—	—	—	—	—	—	—	—	—	—
potsherds	3	—	2	—	—	—	—	—	—	—	1	—	9
net-sinkers (A-type)	3	—	—	—	—	—	—	—	—	—	—	—	—
Bronze and copper													
fr. belt-hook	1	—	—	—	—	—	—	—	—	—	—	—	—
arrow-heads	1	—	—	—	—	—	—	1	—	1	—	1	—
finger-ring	1	—	—	—	—	—	—	—	—	—	—	—	—
fitting	—	—	1	—	—	—	—	—	—	—	—	—	—
curved band (from rim ?)	1	—	—	—	—	—	—	—	—	—	—	—	—
plate (from coat of mail ?)	1	—	—	—	—	—	—	—	—	—	—	—	—
Iron													
U-shaped spade shoeings	1	—	—	1	—	—	—	—	—	—	—	—	—
rectang. spade shoeings	3	—	1	—	—	—	1	—	—	—	—	—	—
socketed hoe-blade	1	—	—	—	—	—	—	—	—	—	—	—	—
fittings	—	—	2	—	—	—	—	—	—	—	—	—	—
plates, rods, etc.	4	—	1	1	—	—	—	—	—	—	2	1	—
Textiles, etc. (group-numbers), e.g.	6	—	2	2	—	—	1—2	1	1	1	2	1	—
piece of silk with writing	—	—	1	—	—	—	—	—	—	—	—	—	—
shoes and sandals of strings	—	—	4	—	—	—	—	—	—	—	1	—	—
mat of strings	—	—	1	—	—	—	—	—	—	—	—	—	—
ring-shaped game-trap	—	—	—	—	—	—	—	—	—	—	1	—	—
brooms of reeds	—	—	2	—	—	—	—	—	—	—	—	—	—

Locality I

A. 8: I:

1. Wooden spatula, rectangular blade with two notches on one edge, narrow handle. Roughly made out of a flat slip. $23.3 \times 1.9-0.5$ cm
2. Round bamboo stick, possibly chopstick. L. 18.3 cm
- 3-4. Two frs. of round bamboo sticks
- 5-12. Eight compl. or fragm. "stationery" slips (without writing), of rectang. or trapezoid sections. The longest one 22.5 cm
- 13-16. Four small wooden frs. of largish objects
- 17-19. Three wooden pegs with projections, pivots, or notches at their ends. L. 19.4—16.7 cm. Pl. 11: 5, 6, and 12: 3
20. Fragm. of round wooden peg with a square, chamfered head at one end. A hole drilled through round part. L. 11.5 cm. Pl. 12: 8
21. Wooden tablet, probably a label, with one end roughly rounded and two notches in each edge near the ends. $13.3 \times 3 \times 0.4$ cm. Pl. 13: 15
- 22-24. Three small, thin bamboo sticks, slightly curved and with one end pointed. Tooth-picks? (a common type of objects, henceforth referred to as "tooth-picks"). The longest one has the point wound with yellowish silk yarn. L. 12.5—10.5 cm. Pl. 6: 6
25. One part of simple wooden X-shaped stand (shaped like a pair of tongs). Long rectangular tablet with one end (base) obliquely cut, the opposite end rounded and with a wide concave cutting in the inner edge; below this cutting an oblique notch runs across one broad-side (matching the other, missing part). Silk thread wound round the cutting, and dark lines lower down probably show how the two parts were held together by strings which were kept in position by a small wooden peg inserted into a hole; another hole is seen in the oblique notch. L. 23. Br. 2.3, Th. 0.5 cm. Pl. 13: 20
26. Wooden spoon-shaped spatula, a little bent upwards between blade and handle. The former is oblong with flat front and convex back, the latter is straight and rounded. 19×4.3 cm. Pl. 7: 5
27. Wooden spatula, made of flat thin slip, bent lengthwise into an S-like curve. Blade rectangular with rounded end, handle success. narrowing and broad. 22.6×3.6 cm. Pl. 7: 10
28. Wooden spatula, rectangular blade with straight end and ridged back, and narrow, rounded handle. 22.1×2.3 cm. Fig. 18: 18, and Pl. 7: 1

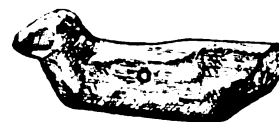


Fig. 15. Miniature wooden duck, A. 8: I; 49.
Scale 2/3.

29. Ditto, made of a flat slip, with long rectangular blade which has straight end. 23×2.1 cm
30. Ditto, of thin slip, rectangular blade with pointed end. 22.6×1.9 cm. Pl. 7: 6
31. Ditto, of thin slip, blade rectangular with oblique, rounded corners, and handle a little bent at obtuse angle to the blade. 20.1×3.3 cm
32. Fragm. of ditto, a little charred and with handle broken off. The blade is broad with convex end and vaulted back. 10.9×3.9 cm
33. Fragm. of ditto, of thin slip, the broken-off handle originally bent at obtuse angle to the blade, which is nearly oval. 6.1×2.3 cm. Pl. 7: 7
34. Fragm. of wooden comb-shaped implement (for weaving?), consisting of a rectangular tablet, flat on one side and slanting on the other towards the broken end, and with a projection beginning 7 cm from the other end. The latter has three longitudinal, 4—5 mm wide notches forming four "teeth". The opposite, broken end has apparently had similar teeth, but no projection. $16.3 \times 4 \times 1.3$ cm. Pl. 11: 3
35. Bamboo slip. 24.2×1.1 cm
36. Fragm. of wooden slip, obliquely cut at one end. 21.6×1.3 cm
- 37-40. Four wooden pegs with oval section. Possibly vertical ribs of basket. L. 31.3—32.2 cm. Pl. 12: 1
- 41-42. Two fragmentary wooden pegs with rounded section, probably handles of spatulas. L. 15 and 9.8 cm
43. Bamboo chopstick, lacquered black at the middle and red on the ends. L. 21.4 cm. Pl. 6: 7
- 44-46. Three plain chopsticks of bamboo. L. 21—20 cm
- 47-48. Two chopsticks of wood, one fragmentary. L. 21.7 and (18) cm
49. Small wooden figure of a duck, with a hole drilled through the body from side to side for a string (or pin). Simply made, perhaps with traces of painting. Unique in the collections. L. 5.4, Th. 1.7 cm. Fig. 15

- 50-62. Thirteen wooden seal-cases of type 1. No. 56 is of the b variety (with wedge), and no. 62 has the characters *yi yüe*, "first month", on the raised ends. L. 4.8—3.8, Br. 3.3—1.5, Th. 2—1.1 cm. Pl. 14: 3, 12
- 63-72. Ten ditto of type 1 a. No. 72 has had a narrow slip jutting out from one end, level with the back. L. 5.2—4, Br. 4.5—2.1, Th. 1.7—0.8 cm
- 73-85. Thirteen ditto, more or less fragmentary. L. 5—3.1, Br. 3.4—1.6, Th. 2.2—1 cm
86. Wooden seal-case of type 2, a little fragmentary. 3.2 × 3.5 × 1.9 cm. Pl. 14: 9
87. Material for ditto, with 3 grooves but no cavity. 5.7 × 4.2 × 2.4 cm. Pl. 14: 7
88. Material for ditto, with 2 grooves but no cavity. 4.7 × 2.7 × 1.7 cm. Pl. 14: 2
- 89-93. Five bamboo "tooth-picks" (cf. A.8: I; 22—24 above). L. 11.3—9.5 cm
94. Short bamboo stick, round section, straight ends. Possibly dowel. L. 11.5 cm
- 95-97. Three chopsticks of bamboo, of which nos. 96—97 probably make a pair. L. 21.1 and 23.3 cm
- 98-99. Two chopsticks of wood. L. 21.6 and 20 cm
- 100-101. Two frs. of wooden chopsticks, of which no. 100 may make a pair together with no. 98. L. (11.8) and (11.1) cm
102. Wooden spatula, with narrow rectangular blade which has convex end and roughly cut back. Long, straight handle. Fig. 18: 19
103. Fragm. of wooden spatula-shaped implement, the broken-off handle unsymmetrically carved out. One side of blade flat, the other (back) with chamfered edges. (13.5) × 3.2 cm. Fig. 18: 10
104. Wooden knife-shaped object made of thin slip which is 0.3 cm thick at the middle and thinner towards the ends. Fore-end pointed and back-end cut straight. L. 19.5, Br. 1.9 cm. Pl. 12: 16
105. Slender bamboo stick, with rectangular section to a length of 9.5 cm, the rest carved round and gradually tapering. L. 24 cm. (Cf. I.A., Pl. CX, Y.III.02, which is a little coarser)
106. Round wooden peg, with one end wedge-shaped. L. 14 cm
107. Wooden slip, one end pointed and sharply cut to a short "cutting-edge". L. 13 cm
- 108-110. Three flat bamboo sticks, pointed at one end. L. 17.2—12 cm
111. Fragm. of wooden peg, possibly "clothes-hanger", with a large projection at one end, which has chamfered edges. L. 18 cm. Pl. 12: 15
112. Square wooden peg, rather long, with two holes perpendicular to each other at both ends. L. 22.5, Th. 0.8 cm
113. Fragm. of ditto, similar but with the holes placed further inwards and at greater distance from each other. L. (11.7) cm
114. Wooden peg, probably "face-peg" but with no traces of painting left. Rather flat with front ridged at upper, broader part which has triangular section; the rest carved flat towards narrowing, pointed end. L. 22, Br. 2.2, Th. 0.9—0.5 cm
115. Fragm. of wooden "face-peg", the black painting almost faded away. Triangular section from top end to a point beneath the mouth of the face, thereafter cut flat, the flat surface widening towards the broken-off, charred, and pointed end. (15.5) × 4.4 cm. Fig. 21: 8
116. Ditto, with (broken-off) pointed end, triangular-sectioned top part. The ridge which marks the nose, ends in a perpendicular notch forming a flat surface which extends about 5 cm downwards. Rather decayed. 24 × 3.8 cm. Fig. 21: 10
117. Ditto, of same general type, rather short and broad. The black-painted features of the face occupy most of the front. 20.2 × 3.8 cm. Fig. 21: 11
118. Ditto with rather long, narrow notch beneath the nose-ridge. Carving and black-painting coarse and somewhat irregular. 26.5 × 2.8 cm. Fig. 21: 14, and Pl. 15: 1
119. Ditto, similar to no. 118 but broader and with sharper nose-ridge. 23.8 × 4 cm. Fig. 21: 15, and Pl. 15: 2
120. Wooden "face-peg" with lower end cut straight. Top part of head triangular in section, the notch beneath rather short and slanting, the edges of the head and the whole of the peg beneath the "chin" cut round. Black-painted face rather elegantly executed. 20.5 × 3.7 cm. Fig. 21: 5, and Pl. 15: 5
121. Ditto, of similar shape and style of painting as no. 120. 20.5 × 3.5 cm
122. Fragm. of wooden spoon-shaped spatula, red-lacquered all over and decorated with narrow black lines on both sides of the handle base and on the handle; portions of blade and handle broken away. The blade nearly pear-shaped and unsymmetrical, the handle straight with round section. Unique. L. (12.3), W. of blade (2.2) cm. Fig. 18: 8, and Pl. 7: 8
123. Fragm. of wooden spoon-shaped spatula, blade pointed-oval in outline and with slightly concavo-convex section, its back grooved lengthwise and ridged along median line.

- Handle straight with flat front and vaulted back; broken off. (16) × 3.4 cm. Pl. 7:2
124. Fragm. of wooden spatula, the fore-end of blade pointed convex, the edges of blade straight and obliquely cut at the base where the straight handle runs out in a ridge on the back of the blade. The broken-off handle rather coarsely chamfered. (16.2) × 2.6 cm. Pl. 7:9
125. Wooden spatula made of a thin slip, with rectangular blade having round corners of fore-end narrowing concavely into the straight handle. 23.1 × 2.5 cm. Fig. 18:17
126. Larger wooden spatula, oblong blade successively narrowing into handle which has round section. 28.7 × 3.8 cm. Pl. 7:11
127. Fragm. of large wooden ladle, coarsely made. The broken-off blade has probably been oval, and certainly concavo-convex; the rounded handle is thickest at its (damaged) free end. (28.7) × 4.5 cm. Pl. 7:13
- 128-133. Six fragmentary spatulas of wood, the blades of which are flat at front, and flat or slightly vaulted at back. The fore-ends of the blades are more or less convex, and the handles straight. L. 13.8—7.1, W. 3.5—1.6 cm
134. Narrow wooden spatula made of a thin slip, (now) bent lengthwise. Blade rectangular with convex end, and narrowing to a handle. 22.6 × 2 cm
135. Wooden spatula with square handle, the blade almost wedge-shaped in section, rectangular in outline. 17.3 × 1.5 cm
136. Wooden spatula with thick handle of oblong section, blade narrow and of about even thickness, a little bent. Charred at handle. 14 × 1.4 cm
- 137-140. Bamboo chopsticks, one fragmentary. L. 24.6, 22.1, 20.6 and (12.5) cm
- 141-149. Nine wooden seal-cases, type 1 b. The smallest one, no. 148, shows traces of clay from seal. L. 5.2—4.2, Br. 3.2—1.6, Th. 2—1 cm
- 150-170. Twenty-one dittos, type 2. Some are made out of a narrow twig, but the greater part are made from thick tablets. No. 170 has some clay left from the seal, the clay being mixed with cut straw and wooden chips. L. 5.9—3.4, Br. 3.9—1.8, Th. 2.3—0.9 cm. Pl. 14:5, 6
171. Ditto of type 1 a, with a longitudinal hole through the two projections on a level with bottom of cavity. There may possibly be traces of string in one hole, and of writing on the projections. 5.5 × 2.7 × 1.5 cm
- 172-197. Twenty-six more or less fragmentary dittos of type 1 b and type 2. L. 7—4, Br. 4.2—1.7, Th. 2.2—1.3 cm

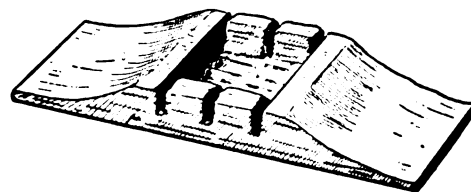


Fig. 16. Wooden seal-tablet (covering-tablet). A. 8: I; 199, Pl. 14: 10 (see also Fig. 17: 11). Half size.

198. Fragm. of ditto, type 2, with traces of writing (?) on the one remaining projection. Two notches on the edges of the back. 4.5 × 2.5 × 2 cm
199. Rectangular wooden seal-tablet, type B 6, (covering-tablet). Seal-cavity in the middle with three grooves. Back flat, front slanting and slightly concave from the cavity towards the ends. Unique in the collections. (For complete specimen with under-tablet, see *Ser.* Pl. XXI.) 12.1 × 3.9 × 1.8 cm. Figs. 16, 17: 11, and Pl. 14: 10
200. Simple wooden seal-tablet, type A 2, with cavity near one end. 7.7 × 3 × 1.5 cm
201. Ditto, type between A 2 and 3, with seal-cavity 3 cm from one end, made out of a twig. Back flat, front rounded except below the cavity, where it is cut flat and slightly slanting towards the end. 12.5 × 2 × 1 cm. Pl. 14: 22
- 202-204. Three dittos, type A 2, similar to no. 200, but made of rough twigs like no. 201. L. 10.7—8.5, Br. 2.2—1.6, Th. 1.7—1.3 cm
205. Short, rounded piece of twig with rectangular cavity near one end. Possibly material for seal-tablet similar to nos. 202—204. L. 6.6, diam. 1.5 cm. Pl. 14: 13
206. Simple wooden seal-tablet, type A 6, (covering-tablet) with cavity in the middle, from which the front tapers towards both ends. The back is not smoothed. L. 7.4, Br. 2, Th. 1.2 cm. Pl. 14: 15
207. Fragm. of seal-tablet, similar to no. 201. L. 4.3, Br. 1.9 cm
208. Wooden seal-case, with 3 grooves across bottom of cavity. Back is slightly convex (unfinished?). 4 × 2.5 × 1.5 cm
209. Long, narrow wooden peg with two nearly square cavities between middle and ends, rectangular section, uniform breadth, well smoothed. Partly charred and split. 23 × 1.9 × 1.1 cm. Pl. 14: 24
210. Multilateral wooden peg, possibly a "seal-tablet" with open, rectangular cavity in its actual middle, the ends being broken off. Made of a twig, which is cut flat on one

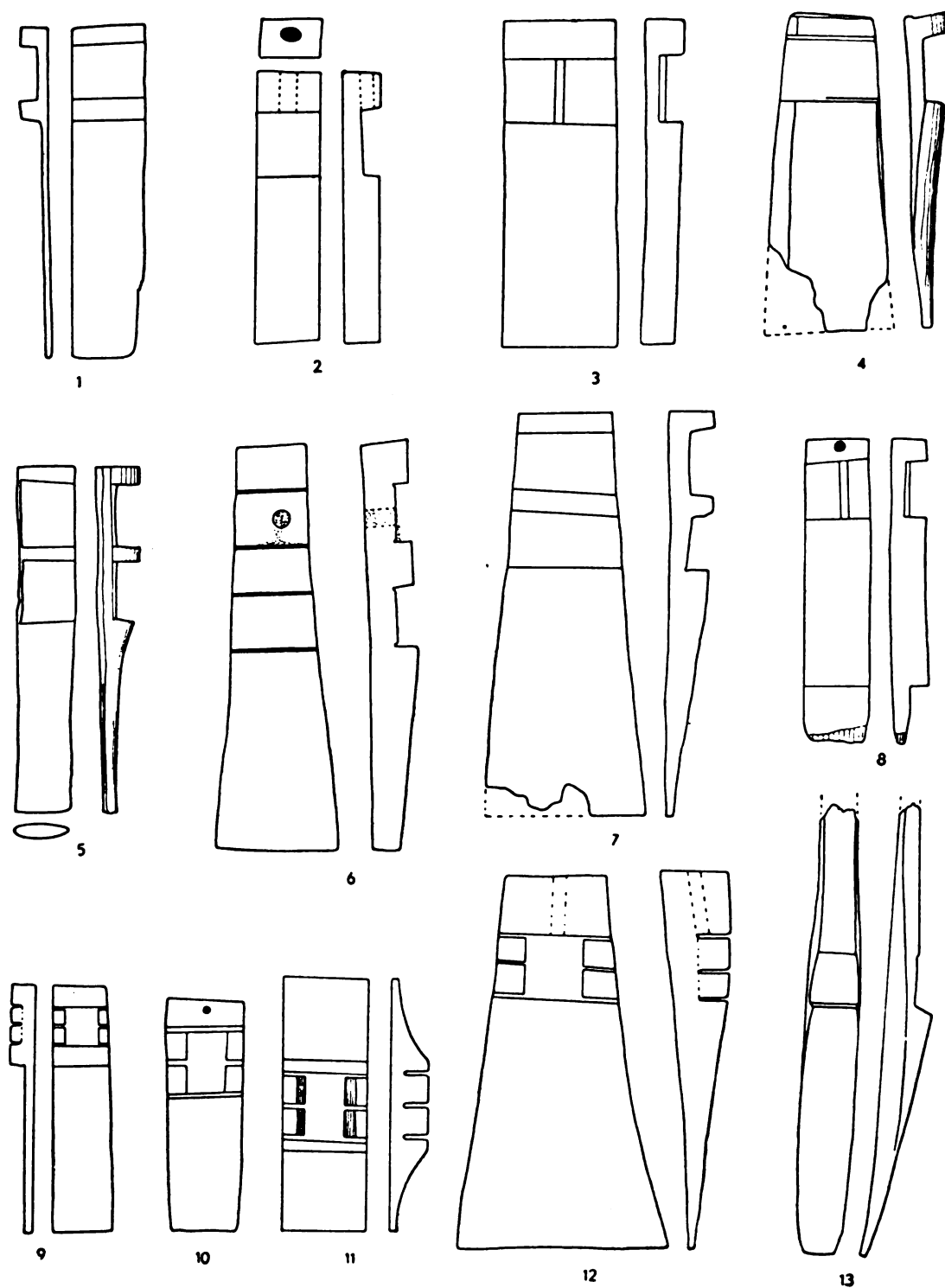


Fig. 17. Wooden seal-tablets from Mu-durbeljin, and A 10 (13). P-marked specimens, from drawings by F. Bergman, not described in lists, and digging locality stated for specimen 2 only. Scale 1/3. 1. P. 175:11, 2. (A 8:II E) unknown P-number, 3. P. 214:1, 4. P. 209:1, 5. P. 311:28, 6. P. 21:1, 7. P. 209:2, 8. P. 55:1, 9. P. 348:7, 10. P. 30:11, 11. A. 8: I; 199 (cf. Fig. 16), 12. P. 8:2, 13. A. 10: I; 21.

- side, where the cavity is situated. Slight traces of writing. $18 \times 1.5 \times 1.5$ cm
211. Fragm. of rectangular wooden block with a large, rectangular hole through its middle. Originally part of some construction, as the ends and the bottom of the block have been partially sawn off; the hole is well made by means of a chisel. $6 \times 3.7 \times 3.1$ cm. Pl. 8: 14
212. Wooden object, possibly club-head, rectangular, with chamfered edges on one side and a square hole through a point near the middle. Tapering from the hole towards one end, the other end showing traces of wear; inside of hole glossy from pressure of some shaft or similar part. $8.6 \times 2.5 \times 1.7-0.8$ cm. Pl. 8: 12
213. Wooden piece with rectangular section, a narrow, rectangular hole through one end and in the other end a notch perpendicular to the hole. $7.8 \times 1.9 \times 1.9$ cm
- 214-218. Five "bolt-shaped" wooden objects, rectangular with a projection at one end, broken off at the thinner part except in nos. 214 and 216. Some may have been used as bolts for small doors. The largest $12.5 \times 2.6 \times 2.7$, the smallest $5.5 \times 2.5 \times 2.1$ cm
219. Rectangular wooden tablet with one end planed down to about half thickness, the offset obliquely cut. Through the thinner part a hole is drilled obliquely, a little to the side of the median line; the long edge farthest from this hole is broken off, and therefore it seems probable that the object was once broader with another hole at a corresponding place on the lost portion. L. 13.1, W. 3.6, Th. 1 cm
220. Ditto without hole, smaller, more coarsely made, the edge of the thinner part worn. $7.8 \times 2.8 \times 1$ cm
221. Ditto without hole, one edge of the thicker part straight, the other edge chamfered and tapering towards the free, rounded end. $8.3 \times 2.1 \times 1.2$ cm. Fig. 20: 8, and Pl. 8: 17
222. Fragm. of wooden block with rectangular hole through middle of narrow side, and an offset at one end perpendicular to the hole. Now split lengthwise, about one half remaining. $6.4 \times 1.9 \times (1.9)$ cm
223. Fragm. of wooden block with a projection at one end, consisting of two square tenons enclosing a rectangular opening. This latter was probably a hole, before the projection was broken off. At the opposite end of the block there are traces of clay-wash. $(7.5) \times 3.2 \times 4.4-1.1$ cm
224. Nearly cubic wooden piece, part of larger object. $3 \times 2.2 \times 1.6$ cm
225. Fragm. of rectangular wooden piece with large pit (diam. c. 1.7 cm) hollowed out near one end to about half thickness. $12.2 \times (2.1) \times 1.4-1.0$ cm
226. Nearly rectangular wooden tablet with large, not exactly round hole through a point near the middle; the edge of the end farthest from the hole is obliquely sawn off, and shorter than the opposite end. Unfinished. $6.8 \times 3.7 \times 0.9$ cm
- 227-228. Two identical wooden tablets, rectangular and well planed; they are made out of a trunk in two ways, one being cut perpendicular to the direction of fibres, the other parallel to it. $14.9 \times 7 \times 0.8 (0.4)$ cm
229. Wooden slip, probably label, with two opposite notches near one end for fastening string. The edges are rounded, showing that the piece was made out of a twig. $11 \times 1.4 \times 0.8$ cm. Pl. 13: 14
- 230-231. Two frs. of ditto, thinner. No. 231 shows faded traces of writing on one side
232. Wooden label with one semi-circular end through which a small hole for a string has been made. Well smoothed. $7.8 \times 3 \times 0.3$ cm. Pl. 13: 12
233. Ditto with the rounded end straighter and coloured red. $7.3 \times 2.5 \times 0.2$ cm
234. Ditto without hole, unfinished. $7.5 \times 3.2 \times 0.5$ cm
- 235-242. Eight dittos with hole through parabolic end, much narrower than the preceding ones; the present specimens seem to belong to a set, as they are all of the same size and proportions. $10.7 \times 1.5 \times 0.25$ cm. No. 235, Pl. 13: 13
- 243-244. Two long wooden sticks with oval sections. At least no. 244 has been wound with some kind of thread or similar material round the middle part, as shown by some light lines. L. 40.5 (incomplete) and 36.3 cm
- 245-249. Five fragments of wooden sticks similar to nos. 243-44
250. Broken-off ditto wrapped in veget. cloth. L. (28) cm
- 251-255. Five flat bamboo sticks, three of which have one or two tapering ends. Nos. 252-53 are prob. brushes — see Figs. 18: 12, 14
- 256-263. Eight wooden "stationery" slips. Some with rectangular, others with trapezoid sections. L. 23.5-16.7 cm, except two smaller frs. with charred ends
264. Nearly oval wooden disc made of two segments, of different kinds of wood; one side is dark (painted ?); the edges are well

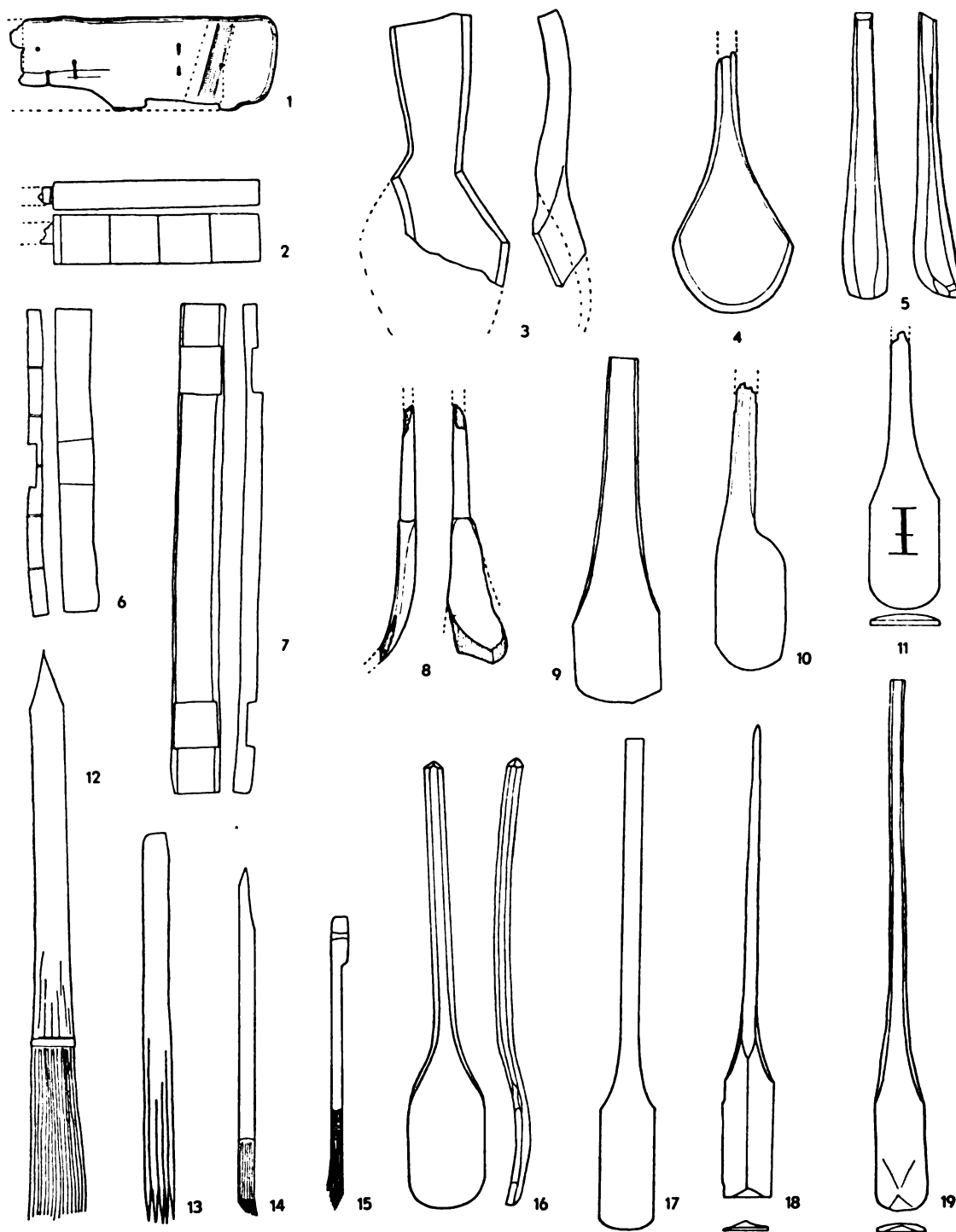


Fig. 18. Wooden spoons, spatulas and other objects, a gourd ladle (3), and flat bamboo brushes (12—15). Specimens 7 and 13, from drawings by F. Bergman, not described in lists; they were probably excavated in mound I. Scale 1/3. 1. A. 10: II; 7, 2. A. 8: II; 100, 3. A. 8: III; 64, 4. (A 8: I) P. 477: 5, 5. A. 8: II A; 60, 6. (A 1: II) P. 392: 1, 7. (A 8) P. 298: 15, 8. A. 8: I; 122, 9. A. 8: II N; 8, 10. A. 8: I; 103, 11. A. 8: II; 59, 12. A. 8: I; 252, 13. (A 8) P. 313: 2, 14. A. 8: I; 253, 15. A. 8: II E; 10, 16. A. 8: II; 58, 17. A. 8: I; 125; 18. A. 8: I; 28, 19. A. 8: I; 102.

- smoothed by a file or similar implement, and show traces of other wood. Probably bottom of a round container.
Diam. 16.5—14.5, Th. 1 cm
265. Nearly round wooden disc with a square hole through the centre, where another square depression had previously been chiselled out to a depth of 0.7 cm. Coarsely made.
Diam. about 9, Th. 1.1 cm
266. Fragn. of round wooden disc, made of two or more segments. One side has been painted black. At three points on the convex edge there is a small, branded (?) hole. Into these holes dowels were prob. driven to hold the thin pane wall of a cylindr. container.
20 × 6.3 × 0.7 cm
267. Segm. of ditto, which on one side (back) has been lacquered red. The edge is slanting, and there are five small holes in it, through which dowels have certainly been driven to hold the lower part of a pane-wall. This disc fits the side of a wooden bucket, 8: I; 269, rather well.
Diam. 13.1, W. of segm. 4, Th. 0.7 cm
268. Segm. of smaller ditto, painted black on both sides, and with some roughly carved lines on one side. The convex edge is chamfered from both sides. 6.3 × 2.1, Th. 0.6 cm
269. Fragn. of the side of a low wooden bucket. One rim is burned. On the inside a slanting notch for fastening the bottom disc, on the outside two 1.5 cm broad notches for hoops, one near the top and the other near the bottom. Orig. diam. 14—16, H. 10.5, Th. 1 cm. Pl. 8:9
- 270-276. Seven more or less rounded wooden pegs with one pointed end.
L. 16.2—8.2, Th. 1.5—0.6 cm
277. Bamboo slip with a transverse notch near each end, possibly for hoops. 23 × 2 cm
278. Wooden slip with black ink-strokes on both sides; the shape is that of a "stationery" slip with oblique edges. 23.1 × 2.4 × 0.5 cm
279. Wooden "stationery" slip, a little tapering towards one end. L. 22.7 cm
280. Ditto, thicker, and with rounded, incomplete narrow end. L. (19.2), W. 1.7, Th. 0.7 cm
281. Beater consisting of a wooden peg, half of which is wrapped in coarse veget. cloth; the handle part is oval in section, and widening a little towards the wrapped part, which is flatter and has a chamfered end. Unique. L. 19, W. 2—1.4, Th. 0.8—1 cm. Pl. 8:7
- 282-283. Two wooden objects or frs. of largish pieces, roughly triangular, thick and flat. 17.5—16.4 × 3—2.5 × 1.5 cm
284. Small wooden piece, one edge flat, the other convex
285. Small wooden prism, probably a kind of die, rectangular, with diagonal black lines painted across the four largest surfaces.
2.7 × 1.8 × 1.3 cm
- 286-288. Three wooden prisms, similar to the previous one but smaller and without painting
- 289-302. Fourteen small wooden pieces, consisting of unfinished or fragmentary seal-cases, slips, prisms with chamfered edges, and the like
- 303-307. Five small wooden wedges, the largest
7.4 × 2.4 × 1 cm
308. Wooden wedge. 10.5 × 1.6 × 0.9 cm
309. Wooden comb with semi-circular back, the fine teeth broken off to a large extent at the base. Hard, fine-grained wood which is typical of the fine-toothed combs of Han type in the collections.
W. 6.6, H. 6.2, Th. 0.6 cm
310. Ditto with coarser teeth, only one of which is preserved to its full length; semi-circular back. Hard wood, fine-grained.
H. 8, W. 5.7, Th. 0.5 cm
311. Ditto of nearly the same shape as no. 310, all teeth broken off at the base. Size above teeth: H. 4.3, W. 5.8 cm. Hard wood, fine-grained
312. Wooden comb-like object, some kind of ornament, made of a narrow segment of a comb similar to no. 309. Two dowel-holes in the longest edge for attaching to another (similar ?) part. Front carved so as to form a projection at the top, its edges chamfered down to the fine teeth. Hard wood, fine-grained.
7.9 × 0.9 × 0.7 cm. Fig. 5:2, and Pl. 13:9
313. Wooden object with rectangular section and concave long-sides. A hole drilled through near one end. 10.6 × 1.7 × 0.8 cm. Pl. 11:11
314. Ditto, but with round section in one end, rectangular section in the other end having the hole. 10.2 × 1.4 × 1 cm. Pl. 11:12.
315. Wooden peg, one end pointed and tapering, the other straight and with round section, the middle with triangular section from a rectangular cavity towards the rounded end. Strongly charred.
L. 11.2, W. 1.1 cm. Pl. 12:11
316. Narrow wooden slip with a square projection at one end, and one edge tapering to a point towards the other end. 9.2 × 0.8 cm
317. Small bamboo peg, one end thick, the other end carved into a wedge. 9.4 × 0.7 × 0.6 cm
318. Wooden wedge-shaped object, flat and wedged at broad end, thick and notched at narrow

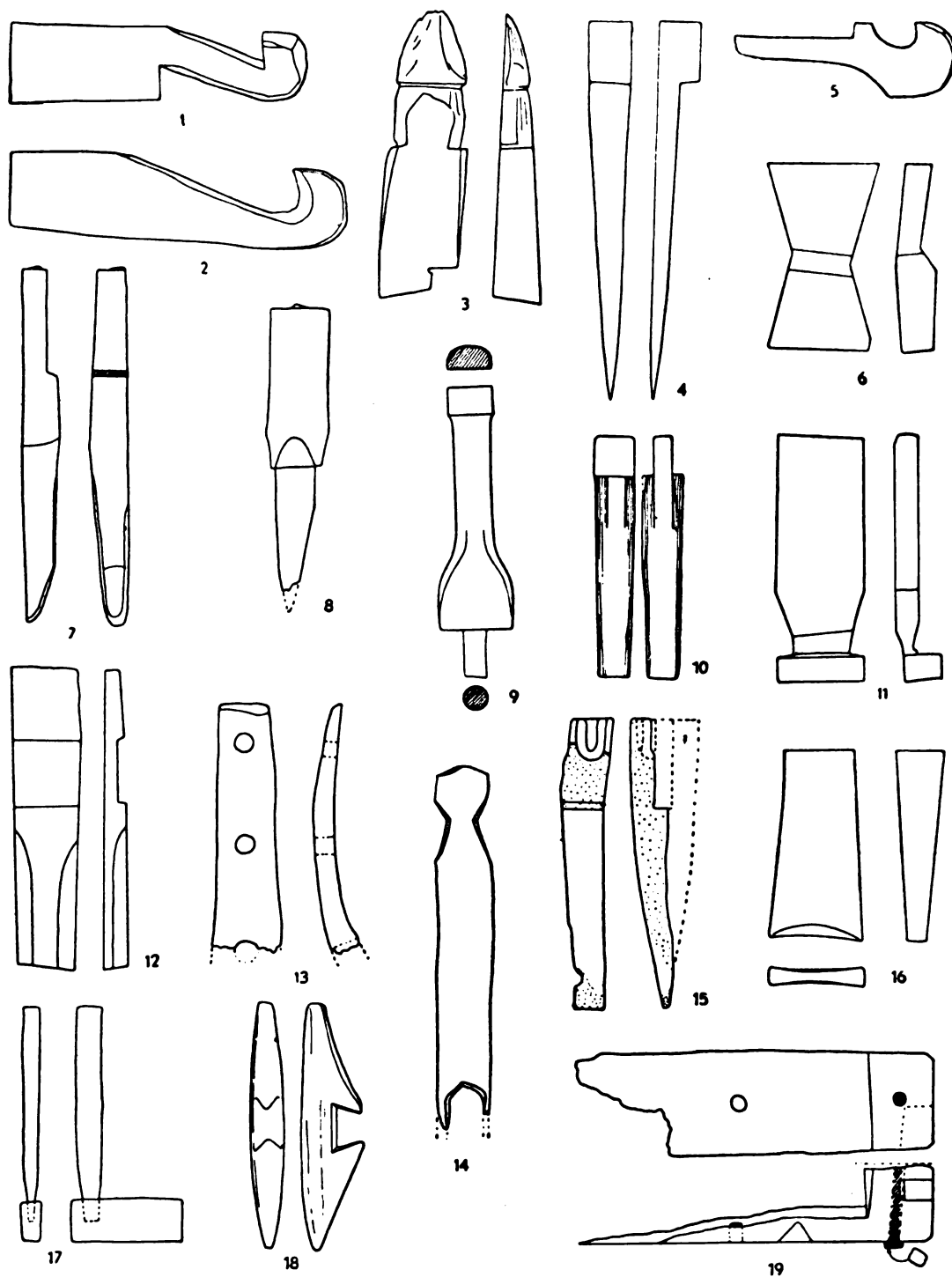


Fig. 19. Miscellaneous wooden objects. Specimen 14, from a drawing by F. Bergman, not described in a list, was probably excavated in mound II. Specimen 15 with intact surfaces painted black (=stippled). Scale 1/3. 1. (A 2: II) P. 393: 3, 2. (A 2: II) P. 393: 1, 3. A. 8: I; 400, 4. A. 8: II N; 23, 5. A. 8: II A; 42, 6. A. 8: II N; 13, 7. A. 10: II; 6, 8. A. 8: I; 401, 9. A. 8: I; 399, 10. A. 8: I; 405, 11. A. 8: II D; 11, 12. A. 8: II A; 37, 13. A. 8: II C; 8, 14. (A 8) P. 175: 16, 15. A. 8: II S; 38, 16. A. 8: II S; 64, 17. A. 8: II; 190, 18. (P 4) P. 197: 1, 19. A. 8: II A; 23.

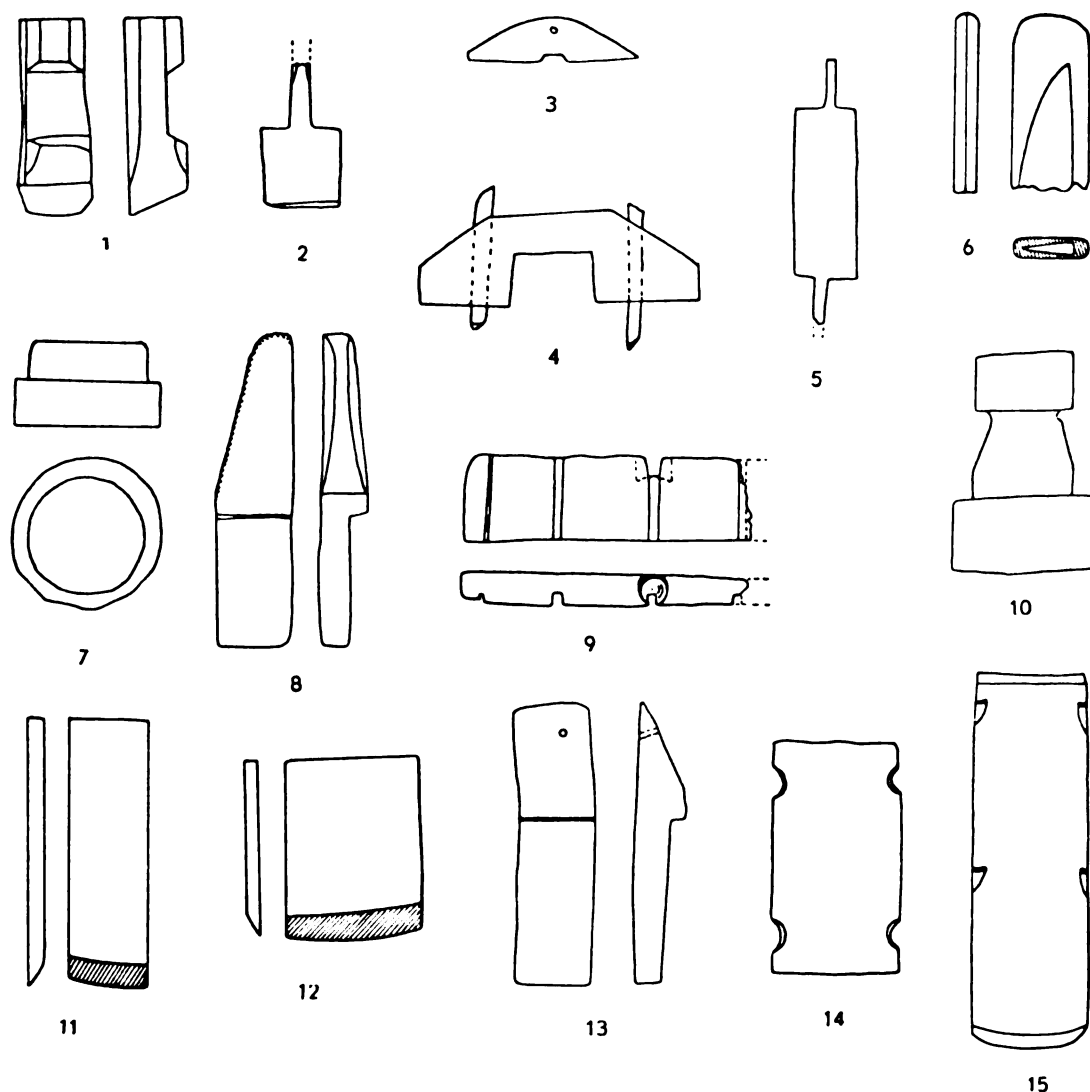


Fig. 20. Miscellaneous wooden objects. Specimen 4, from a drawing by F. Bergman, not described in a list, was probably excavated in Locality II A. Scale 1/2. 1. A. 8: II S; 9, 2. A. 8: II C; 7, 3. A. 8: II; 194, 4. (A 8) P. 144: 9, 5. A. 8: II; 192, 6. A. 8: III; 58, 7. A. 10: I; 23, 8. A. 8: I; 221, 9. A. 3: 4, 10. A. 8: I; 388, 11. A. 8: II; 151, 12. A. 8: II; 98, 13. (A 2: II) P. 358: 1, 14. A. 8: II N; 11, 15. A. 8: II S; 62.

- end. The broad end worn and with traces of blue colour.
L. 10.7, W. 2.3—1.2, Th. 0.9 cm. Pl. 13: 16
319. Fragm. of wooden piece with a small hole through one end
320. Fragm. of round wooden peg with a round tenon cut at one end.
L. 9.5, diam. 1.2, of tenon 0.9 cm
321. Flat wooden object with a square tenon at each end, and a hole drilled through centre; the middle part is square and hollowed out to half thickness, the end portions are tra-

- pezoid, narrowing towards the tenons.
9.7 × 1.6 × 0.8 cm. Pl. 8: 6
322. Ditto but without hole and tenons, strongly charred. 8.8 × 1.5 × 0.9 cm
- 323-330. Eight wooden sticks and slips with more or less regular notches in the edges. One is charred. L. 22.6—11.3, W. 2.4—1 cm
- 331-345. Fifteen small carved wooden pieces, parts of, or intact, knife-shaped implements, spatulas, etc. L. 12—6 cm
346. Piece of gourd-vessel, with portion of chamfered rim remaining

347. Split wooden peg with some hair fastened in the chink. Black-painted. 9.7×1.6 cm
- 348-360. Thirteen slips of wood and bamboo, mostly "stationery", some with red painting, and others with notches. L. 19.5—5 cm
- 361-366. Six frs. of wooden sticks, two with hexagonal sections, the others rounded with three smoothed facets (for writing ?). L. 18.5—5.8, diam. ca. 1.7 cm
367. Wooden stick, one side flat, the other rounded. At each end on the rounded side a flat, thin tenon. $18 \times 2.2 \times 1$ cm
- 368-369. Two sticks similar to the previous one, no. 369 with broken-off tenons. L. 23 and (17.3) cm respectively. Pl. 13: 21
370. Spool-shaped wooden piece, possibly handle of implement, with oval section. In one end a broken-off flat tenon. $13.1 \times 3 \times 1.8$ cm
371. Carved wooden object, possibly leg of food-tray (cf. e.g. Bergman 1939, Pl. 20: 5 which is, however, much more elaborate). Rectangular in section, one end thinner (tenon ?) and projecting by means of a notch, which reaches almost to the opposite end; one edge is chamfered and rounded. $5 \times 1.9 \times 1.5$ cm
- 372-373. Two wooden objects, possibly material for objects such as no. 371
- 374-375. Two wooden pieces, partly carved, unfinished
376. Bamboo tube with a joint, split up lengthwise, possibly to hold an edged blade of knife or similar implement (?). L. 11.3, diam. 2.6 cm
- 377-381. Five small sawn-off pieces of bamboo, one a little charred
- 382-386. Five short sawn-off and knife-cut pieces of twigs and branches
387. Wooden top-ornament or handle of implement, consisting of a roughly carved, flat piece resembling a heart, the top narrow-side slanting towards its middle. The side edges rounded, the under-side straight and with a square peg inserted into a hole (peg broken). $9 \times 5 \times 3$ cm. Pl. 13: 10
388. Wooden bobbin-shaped roll, cleat, one end larger than the other, and the waist part profiled. Roughly made. H. 5.7, diam. 3.9—2.7 cm. Fig. 20: 10
389. Irregularly carved wooden object, refuse
- 390-397. Eight frs. of more or less finished seal-cases, type 1 or 2
398. Wooden slip, broken off at both ends, with 8 small notches in one edge. $(9) \times 1.2 \times 0.7$ cm
399. Wooden piece with round tenon at one end, which is broad and flat, long and narrow middle part with chamfered edges, and the other end a little projecting with rounded edges; the back is flat between tenon and the other end. Strongly charred. $15.3 \times 3.3 \times 1.2$ cm. Fig. 19: 9
400. Wooden ornament (?) with one side (the back) flat, the other side roughly carved with notches in the edges. $13 \times 3.5 \times 1.2$ cm. Fig. 19: 3, and Pl. 8: 10
401. Wooden peg, for insertion into a wall or handle of socketed chisel ? Half of peg is naturally round (diam. 2.5 cm), the rest square and tapering to a point. The rounded part chamfered at waist. L. 13 cm. Fig. 19: 8
402. Wooden object similar to no. 401, but with rectangular section of "handle" part, and the pointed part much thinner. The offset at base of the latter part shows traces of pressure. $12 \times 3.7 \times 2.7$ cm
403. Wooden peg, round except at one end, where it is square and broader. $11.5 \times 2 \times 1.7$ cm
404. Wooden object with rectangular section, except at one end, where it is rounded and cut off. $5.3 \times 2.3 \times 2$ cm
405. Round wooden peg with a square tenon at one end, the tenon being cut out of the middle and having the same width as the main part. Perpendicular to the tenon the end of the peg is cut flat. L. 11, diam. c. 1.8 cm. Fig. 19: 10
- 406-415. Ten frs. of wooden sticks and pegs, more or less regularly carved, mostly rounded. The first two painted black, one of the others charred at the end. L. 13.1—6.4 cm
416. Nearly complete wooden bowl cut in one. Oval, with one thick lug-handle, shaped like a D, carved out on each long-side level with the rim. The outside roughly carved and slanting inwards from a line running at about half the height. Under-side flat and oval. The inside is carefully smoothed and lacquered red, the outside is painted black, including the lug-handles which in addition have a red-lacquered design, resembling a "pea-pod", on the outside (cf. e.g. *I.A.*, Pl. XLVII, T. XXIII.o.01, where the "pea-pod" pattern is much more elegantly executed than here). L. c. 15, W. 13, without handles 10.7, H. 4.8 cm. Fig. 23, and Pl. 6: 18
417. Piece from rim with handle of wooden bowl of the oval type, lacquered red on inside and probably also elsewhere. L. 12.7, W. of fragment 4.5 cm
418. Handle of oval wooden bowl, the inside lacquered red, the outside painted black with, in addition, a "pea-pod" design in red lacquer. L. 10.5 cm
419. Handle of smaller ditto, lacquered red all over. L. 8 cm

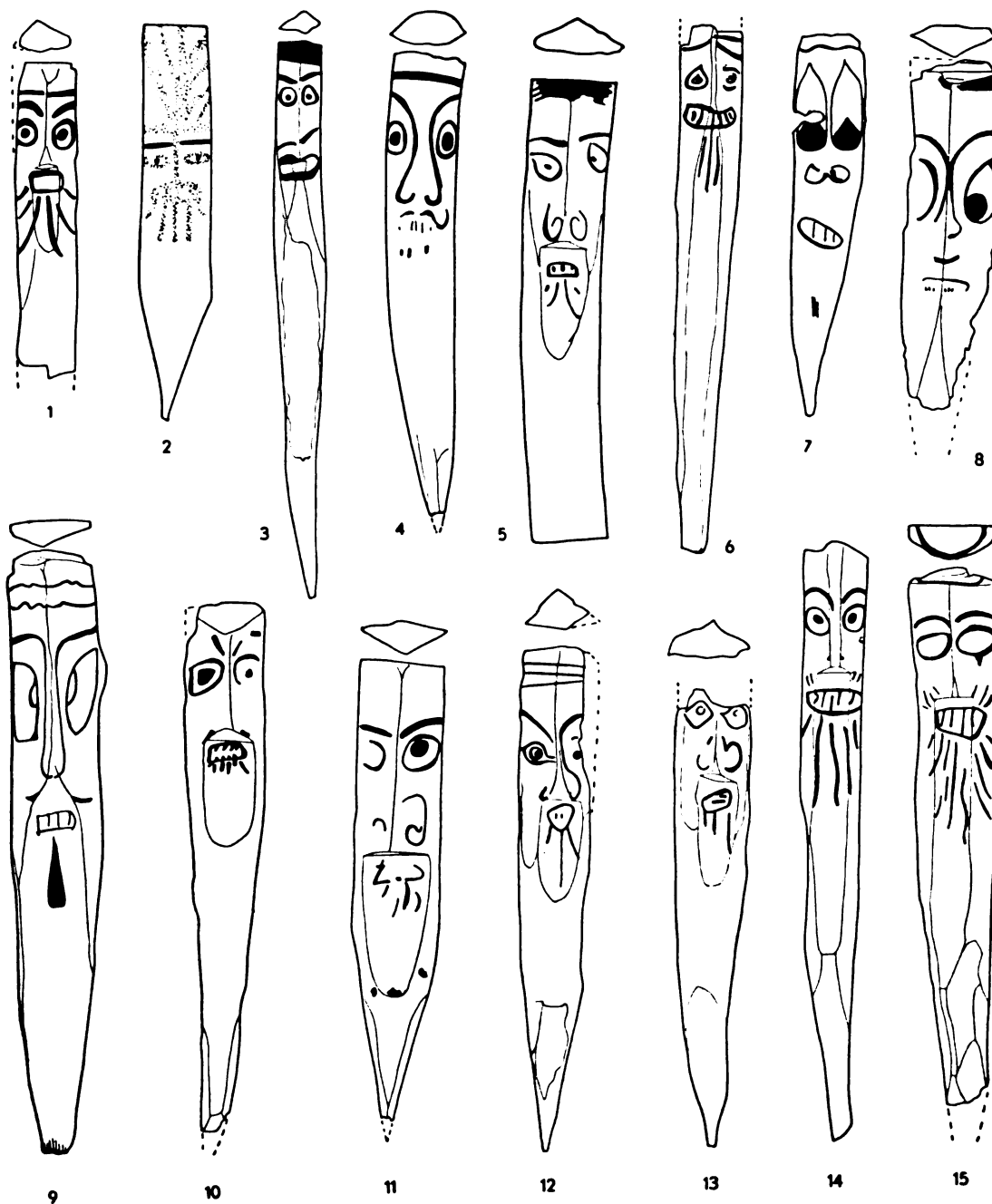


Fig. 21. Wooden "face-pegs". Painted in black, specimen 2 also in red (= stippled). Scale 1/3.

1. A. 8: II; 83, 2. (A 6) P. 166: 3, 3. A. 8: II; 82, 4. A. 8: II E; 29, 5. A. 8: I; 120,
6. (A 10: II) P. 256: 4, 7. A. 8: III; 68, 8. A. 8: I; 115, 9. A. 8: III; 69, 10. A. 8: I; 116,
11. A. 8: I; 117, 12. A. 8: II; 81, 13. A. 8: II; 84, 14. A. 8: I; 118, 15. A. 8: I; 119.

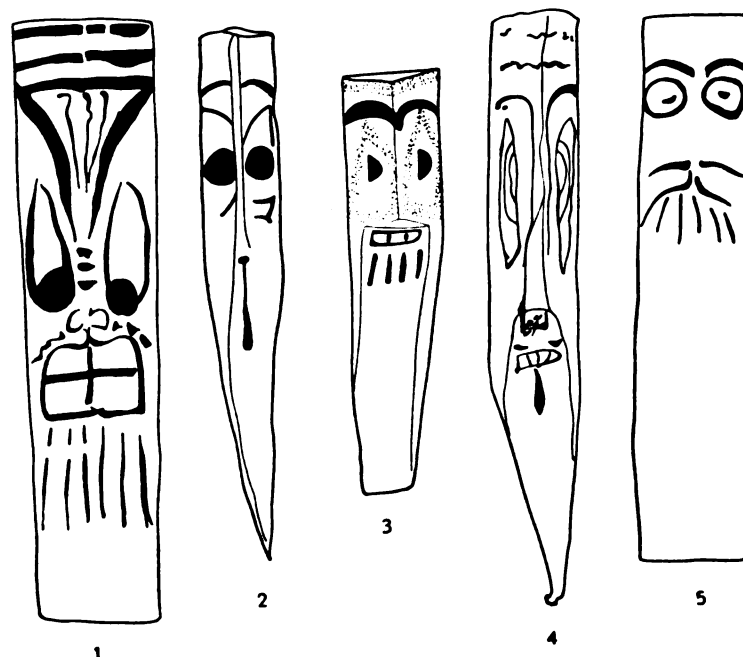


Fig. 22. Wooden "face-pegs" from Mu-durbeljin, Locality III (not described in the list). Painted in black, specimen 3 also in red (=stippled). From drawings by F. Bergman. Scale 1/3. 1. P. 304: 1, 2. P. 304: 2, 3. P. 304: 3, 4. P. 309: 12, 5. P. 309: 13.

420. Ditto, lacquered black, except for larger part of the inside, which is lacquered red. The height is about half that of the foregoing one. L. 6.7 cm
421. Ditto, lacquered black all over, of the same low height as no. 420. L. 8.4 cm
422. Ditto, lacquered red all over, charred at one edge. Height as in no. 420. L. 8 cm
423. Fragm. of large lug-handle of bowl like the preceding ones, lacquered black on outside, and red on inside. The black extends well into the inner surface where it is covered with the red lacquer. L. (5.2), W. 1.8 cm
424. Fragm. of handle of small bowl of the oval type, lacquered red all over. Inner surface of handle convex, unlike all other handles, where it is concave below a usually ridged rim part; the latter feature is here replaced by an incised line. L. (3) cm
425. Ditto, of largish bowl, lacquered red all over. Proportions similar to those of no. 423. L. (7.4) cm
426. Handle of largish bowl, with traces of black paint on outside. Among the longest in these collections, but width only 1.3 cm. L. 9 cm
427. Fragm. of handle of bowl like the preceding ones, a flat splinter with traces of red and black lacquer. L. 8 cm
428. Larger part of oval wooden bowl of the rough type, the rim and lug-handles missing. Outside painted black, inside lacquered red. L. 14.7, W. c. 8.5, H. has been about 5 cm
429. Fragm. of lower part of wooden bowl cut in one, oval, with smooth, convex outside, and narrow, oval, raised standing surface (type as A. 33: 5; 20, Pl. 6: 17). Outside lacquered black, and inside red. L. (13.5), reconstr. L. c. 15, H. (3), size of under-side $9.2 \times 4 \times 0.3$ —0.5 cm
430. Piece from side of wooden bowl, of the rough oval type. Painted black on outside, lacquered red on inside. L. (11.2) cm
431. Fragm. of cylindrical wooden container, from wall which consists of a thin bent pane and is thicker at one longer edge than at the other (4—1 mm). Lacquered red all over with some kind of greyish white substratum (lime ?). L. (11.5), W. (3.7) cm
- 432-433. Two small frs. of probably one wooden bowl, of the common rough oval type
- 434-435. Two dittos, black- and red-lacquered
436. Fragm. from rim of wooden bowl of unique type in the collections, being probably round, with thick wall, cut in one. On the outside near the rim runs an annular furrow, for

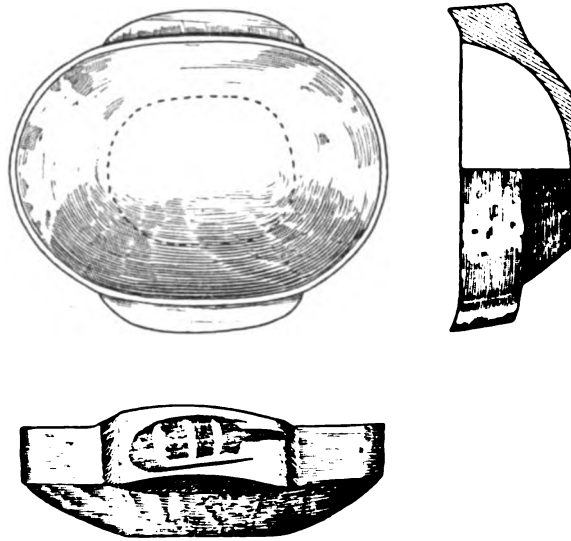


Fig. 23. Oval wooden bowl, A. 8: I; 416 (Pl. 6: 18), representing the commonest type of wooden bowls in the Han ruins. The inside is lacquered red, the outside painted black with a red-lacquered design on the lug-handles. Scale 1/3.

- string or wire-hoop (Br. 2, depth 2.5 mm). L. (9), Th. 1.5—1.2 cm
437. Clay with square seal-impression, consisting of the four characters *Kü-yen ? yin*, "Kü-yen (official ?) seal". On the back negative impressions of four transverse strings, and the positive impression of one of the seal-case grooves in the edge. Full size $3 \times 2.5 \times 0.5$ cm. Pl. 17: 2 a, b
438. Small glass ornament for mounting (in an ear-pendant ?). Spool-shaped with 3 small projections (two of which are broken off) radiating from the middle part. Unique. H. 0.8 cm. Fig. 76: 1
- 439-441. Three spool-shaped earthenware net-sinkers of type A. L. 5.9, 5 and 3, diam. 1.2—1.1 cm
442. Piece from everted rim of earthenware vessel. Red paste, hardness Mohs 5.0. Th. 1.2—0.6 cm. Fig. 4: 7
443. Piece from straight rim of earthenware vessel. Brick-red paste. Th. 0.5 cm. Fig. 4: 4
444. Small ear-handle of earthenware vessel, of uniform breadth. A-paste. $2.4 \times 1.5 \times 0.5$ cm
445. Antelope-horn, sawn off at both ends. L. 14.5, Th. c. 4 cm
446. Fragn. of iron rod with a knob at one end, possibly a chisel. The knob consists of folded top end of the main part. Even breadth (1.5 cm) and thickness (0.3 cm). L. (10) cm
447. Fragn. of iron rod of uniform breadth, very rusty with traces of wood covering both sides (from wooden sheath ?). $(6) \times 1.8 \times 0.4$ cm
448. Fragn. of fairly long, thick "hoop-iron", very rusty. Both long edges are thinner than the median part. Br. 3.3 and Th. 0.7 cm at one end, 3 and 0.5 respectively, at the other end. L. (18.8) cm
449. U-shaped iron shoeing of spade, socketed. Very rusty, the edge being particularly decayed. H. c. 12, W. 13, Th. at top of the stems 2.2 cm. Th. of material 4—5 mm. Fig. 24, and Pl. 5: 11
450. Fragn. of socketed iron hoe-blade, the hollow base rectangular in section and of uniform breadth, the cutting-edge (now broken off and very rusty) probably strongly widened and convex. At the middle of one broad-side, just below the bottom of the socket, there is a now flattened ring-shaped "ear", once welded on to the side perpendicular to the cutting-edge for string-attachment of the blade to the shaft. Size about $9 \times 6 \times 3$, depth of cavity c. 4.5 cm. Fig. 48, and Pl. 5: 16
- 451-452. Two frs. of a nearly rectangular, socketed iron blade of a spade. Very rusty. The section triangular, the cavity extending through most of the blade except for a 0.8—1.4 cm broad border along the cutting-edge. Corners of the latter a little rounded. Reconstr. size c. $17.5 \times 5.7 \times 1.6$ cm. Th. of material 4 mm
453. Fragn. of ditto, the edge more convex, the edges of the base to a large extent missing. $(13) \times (4.2) \times 1.6$ cm
454. Fragn. of a slightly bulbous plate of iron.

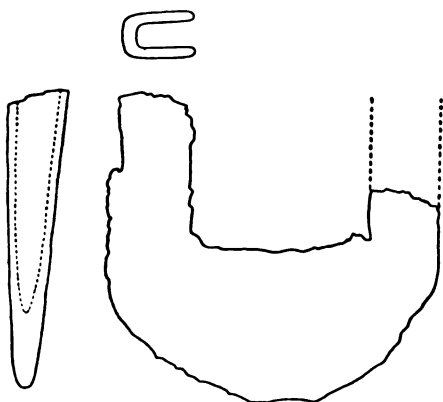


Fig. 24. Iron "U-shaped" shoeing of a hoe or spade.
A. 8: I; 449, Pl. 5: 11. Scale 1/3.

Uniform thickness throughout (4 mm).
(7.8) × (4) cm

455. Fragm. of bronze belt-hook with stud. The main part very thin and flattened oval in section, and of fairly uniform breadth; the actual hook missing. Inferior make. L. (4.8), Br. at stud 1 cm. Th. 3—1.5 mm. Fig. 9: 3, and Pl. 4: 14
456. Bronze arrow-head of the ordinary Han type; triangular section, the sides slightly convex towards the point, the three edges forming small barbs at the base, a small triangular depression on each face near the base. The latter is now covered with iron rust from the (missing) tang. Full L. 3.9, of head 2.5, W. of faces 1 cm
457. Fragm. of thin bronze plate, possibly lamina from coat of mail. Two edges are straight and at right angles, the third edge being convex with 3 small holes near to it, the fourth edge broken off and partly cut oblique. (5.2) × 4.6 × 0.1 cm. Fig. 10: 1
458. A few frs. of a slightly curved bronze band of uniform breadth, with slightly convex-concave section. The inner edge thicker than the outer. (12) × 1.8 cm
459. Fragm. of plain bronze finger-ring, decorated with an incised double-line near each edge. Br. 0.9, diam. 1.95 cm
460. *Wu-shu* coin. Diam. 27 mm
- 461-466. Six *Wu-shu* coins. Diam. 25.5—27 mm. Pl. 4: 7, 8
- 467-468. Four *Wu-shu* coins, three of which (no. 468) are fragmentary and attached to each other by aerugo
- 469-472. Four Chinese coins, probably *Wu-shu*, much corroded
473. Piece of thin plaited work of hemp (?)

strands, possibly lined with silk. Part of shoe or mat ?

- 474.. Piece of nice plaited work of cane, with curved rim. Fragm. of a fan ? (the plaiting quite similar to *Ser.*, Pl. LIV, T. XIV.iii.0016, but material finer in our specimen)
475. Piece of rope, about 1 cm thick
476. 1-24. Various frs. of natural silk, silk wadding, blue silk plait, veget. cloth, mats, cords and ropes of veget. fibres, and white and brown matted felt in one piece. Fig. 38: 2 (See Sylwan 1949, p. 26)
477. 1-42. Frs. of silk in natural brown and in various colours, some sewn together into e.g. bands, a collar, etc.; nos. 39 and 40 are possibly nostril stoppers for the dead; further, silk wadding and a rope of veget. fibre (See Sylwan 1949, p. 26)
478. 1-15. Frs. of silk in different colours, silk padding, and veget. cloth (See Sylwan 1949, p. 26)

P. 8:

4. Wooden seal-tablet of type A 6 (covering-tablet). One Chinese character on each of the slanting parts. Somewhat charred. 11.5 × 2.8 × 1.7 cm. L. of cavity 3.4 cm

P. 30:

20. Wooden seal-tablet of type A 3. Across bottom of cavity there is a saw-groove; back is a little bulging, front shows traces of writing. 18.3 × 3.2 × 1.2—0.9 cm. L. of cavity 2.1 cm

P. 35:

- 1 (or 7). Wooden "face-peg" without the notch marking chin and base of nose. Back flat, front cut into 3 facets with faded traces of painting. 23 × 3 × 2.7 cm

3. Wooden seal-tablet of unusual type and size, the cavity being placed at about one third of the length from one end, the interjacent front part flat and slanting towards the end; the front beneath cavity is cut into 3 facets (for writing, of which there are no traces here). Two characters written on bottom of (seal-) cavity. 35.5 × 2 × 1.8 cm. Distance between cavity and top end 10.8 cm

P. 49:

1. Fragm. of wooden seal-tablet of type A 4, with concave longer sides; the remaining part is from the wedge-shaped end which has large characters written on the front. Hard wood. Th. 3.5 cm
2. Largish fragm. of ditto, broken off along the median line. The cavity seems to have had a hole through the bottom. Writing on the front. Coarsely made of hard wood. L. 17.8, Th. 3.7, L. of cavity 2.9 cm

- P. 103:
16. Fragm. of wooden seal-case of type 1 or 2, with traces of writing on the back. L. 5.1 cm
- P. 127:
1. Upper part of large wooden seal-tablet of type A 5, with writing on both projections. Br. at top end 4.1, Th. 2 cm
- P. 129:
1. Wooden slip with 8 incised lines across one side, the intervals measuring 1.7—2.5—2—1.5—1.8—1.8—2.3—2—2.7 cm. L. 18.3, Br. 1, Th. 0.4 cm
- P. 136:
1. Wooden seal-tablet of type A 2 with bark remaining on front. 8.8 × 1.9 × 1.3 cm. L. of cavity 2.6 cm
- P. 157:
22. Longitudinal fragm. of wooden peg with rectangular section, pointed at one end. Traces of writing on at least one side. 24.4 × (3.5) × 2.5 cm
23. Fragm. of thick wooden tablet with rectangular hole (3 × 1.1 cm) and indistinct traces of writing on original surface. 20.4 × 2.7 cm
- P. 158:
1. Bamboo slip, carefully pointed at one end. 23.5 × 0.8 cm
11. Longitudinal fragm. of wooden seal-tablet, to which an ordinary written slip (*kien*) is attached (no details at present as to the method of fastening). Near one end of the tablet a round hole has been drilled through, and at the opposite end a 5.7 cm long seal-cavity occurs. 23 × (2.2) × 1.4 cm
- P. 176:
63. Wooden seal-case of type 1 a, with traces of writing on bottom of cavity. The latter is 3.2 cm long. 4.9 × 3.1 × 1.7 cm
- P. 178:
12. Wooden slip with 6 incised lines across the front of one side, the intervals measuring 2.1—2.6—1.7—2.7—2.0—1.5—1.8 cm. One end broken off, the other with two characters. (14.6) × 1.1 × 0.4 cm
- P. 214:
2. Wooden seal-tablet of type A 4, made of hard wood. The wide lower part is even more wedge-shaped, and thinner, than e.g. P. 30:20 above. Indistinct traces of writing cover whole of front. 17 × 3.2 × 1.5 cm. L. of cavity 2.2 cm
- P. 257:
1. Ditto, similar to the previous one, with indistinct traces of writing on the front. 18.2 × 3.4 × 1.3 cm. L. of cavity 2.3 cm
- P. 258:
35. Fragm. of wooden seal-tablet, in general form similar to P. 35:3 above, but round instead of square in section. Faded traces of writing on slanting part of front between cavity and the 10.8 cm distant top end. Diam. 2.2 cm
- P. 262:
1. Wooden seal-tablet of type A 4, with traces of writing on front. 12.8 × 6.7 × 2.3 cm
- P. 264:
17. Wooden chopstick, oval section, middle part lacquered black and ends lacquered red. L. 20.9 cm
- P. 298:
2. Wooden spatula, blade rather short and rectangular with convex end, handle straight, narrow and broken off. Similar to A. 8: II; 58 below but not bulbous. Blade, L. 7, W. 3.2 cm
3. Ditto, blade rectangular with convex end, handle broken off (now 2 cm long). (19) × 3.3—1.6 × 0.5 cm
4. Wooden seal-tablet of type A 2, nearly square section, a little tapering towards lower end. 2.7 cm from top end begins cavity, below which there are some traces of writing on the front. 15.3 × 1.5 × 1.4 cm. L. of cavity 2.2 cm
6. Wooden peg, carefully rounded and tapering from one end to a point about 5 cm from the opposite end, this lower part being triangular in section and with 3 small gashes opposite each other on the three edges. L. 22.6, diam. 2—1.3 cm
17. Rectangular wooden tablet, with a "seal-cavity" near each end, bulbous "front", and three characters on the flat "back" near one end (cf. P. 298: 15, Fig. 18: 7, which is nearly identical except that its front is flat). 22.6 × 2.3 × 1.1 cm
- P. 313:
34. Chopstick of bamboo. L. 23.2 cm
- P. 318:
13. Ditto of wood. L. 21 cm
18. Wooden peg, roughly rounded, with one end thicker and carved symmetrically into some ornament (head of man or animal ?), the other end broken off. (14) × 1 × 1 cm. Fig. 5: 1
20, 22-25, 27. Five chopsticks of wood, partly fragments. L. of no. 20 is 22.3, of no. 23, 22.5 cm
28. Chopstick of bamboo. L. 23.3 cm
- P. 326:
8. Wooden seal-tablet of type A 4, with writing on lower part of front, and a black dot painted on the top projection (a common

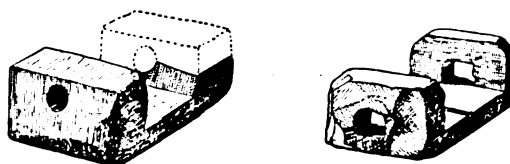


Fig. 25. Two small wooden objects, possibly used as seal-cases.
A. 8: II; 35 (left), and A. 27: B; 1. Half size.

mark on wooden listings, labels, etc.

13.6 × 3.5 × 1.5—0.8 cm. L. of cavity 3.1 cm

23. Fragm. of wooden peg of semi-circular section, the flat front covered with writing which has now almost faded away. Between top end and a point 12 cm lower down, front surface is planed off 0.3 cm. Lower end broken away. (22.2) × 2.7 × 1.9 cm

P. 331:

2. "Female" fire-stick, consisting of a nearly square-sectioned tapering stick with 3 large "hearths" bored in one edge, and a fourth one placed beside these. 18 × 1.5 × 1.4 cm
3. Wooden slab with tenon at one end, and a rectangular hole between the narrow-sides. Main part as well as the tenon is of rectangular section, the latter 11 cm long and narrow and worked out of the slab by cutting away most of the broad-sides. 23 × 3.6 × 3.3 cm
4. Wooden seal-tablet of type A 2, with indistinct writing on front below cavity. 10.7 × 1.8 × 1.2 cm
5. Wooden peg (seal-tablet ?) of about square section, one side being vaulted. 5.2 cm from one end a "seal-cavity" is hollowed out, its length 2.4 cm; other end cut off. 20.8 × 1.7 × 1.8 cm
6. Wooden peg, nearly "bolt-shaped", with square section, one end thickened, the other end pointed and charred. 17 × 2.5 × 2 cm
8. Wooden "bolt-shaped" piece, rectangular. 14.7 × 1.8 × 2.2—0.7 cm
10. Round wooden peg with flat, 2.5 cm wide projection at one end. L. 12.1, diam. 1.2 cm

P. 477:

5. Wooden spatula of unusual form, made of written wooden tablet. Handle broken off. Blade semi-circular in outline in its fore half, and nearly triangular in its base half where it passes over into the handle. L. (12.3), W. of blade 5.7 cm. Fig. 18: 4
6. Unfinished wooden seal-case of type 1 or 2, the back naturally rounded. 5.3 × 2.5 × 1.8 cm
7. Wooden seal-case, belonging to a group of thirteen simply made seal-cases which were given the following measures collectively: L. 5.7—3.8, Br. 3.3—1.6, Th. 2—1 cm. (The other 12 specimens are listed elsewhere)

Test-pit P

P. 115:

4. Wooden seal-case of type 1 a, belonging to the same sized group as P. 477: 7 above
5. Wooden spatula, similar to A. 8: I; 31, made of a *kien*. 22.1 × 4.5—1.6 cm
6. About half of a wooden spatula; broad blade with marked shoulders. L. 11.1 cm; L. of blade 5.2, Br. orig. 5 cm

Locality II

A. 8: II;

1. Wooden seal-case of type 1 b. 5.1 × 3.5 × 1.6 cm
2. Ditto, 4 × 2.5 × 1.4 cm
- 3-4. Two dittos of type 1 a, made of round pegs, roughly carved. 5.5 × 1.5 × 1.1 and 4.3 × 1.4 cm
5. Ditto of type 1 a. A black spot on the middle of the dissimilar projections. 4.7 × 2.2 × 1.4 cm
6. Ditto of type 1 a with an unintentional (?) hole through bottom of cavity. 5.5 × 2 × 1.4 cm
7. Ditto of type 1 a with traces of clay from the seal. 4.4 × 2.6 × 1.4 cm
- 8-34. 27 dittos of type 1 a. L. 5.5—3.4, Br. 2.9—1.7, Th. 1.8—1 cm
35. Ditto of a somewhat different type from the preceding ones of type 1: both projections have a round, longitudinal hole (diam. 6—7 mm). A groove also in the middle of the depression, and the back slightly convex; fragmentary condition. 5.9 × 3.3 × 2.1 cm. Fig. 25
36. Ditto of type 2. Traces of seal-clay and a string. 4.4 × 3.5 × 1.2 cm
37. Unfinished ditto, consisting of a rectangular wooden piece with two saw-grooves near each short end, but no cavity. 4 × 2.3 × 1.5 cm
- 38-49. Twelve more or less fragmentary dittos of types 1 or 2. L. 5—3.6, Br. 3.6—1.8, Th. 3.2—1 cm
50. Wooden seal-tablet of type A 6 (covering-tablet). In the edges of one end there are two notches, connected with each other by a notch on the back (not original ?). 11.3 × 2.7 × 1.4 cm. Pl. 14: 14

51. Wooden object, somewhat resembling a seal-tablet but with the sides tapering from the cavity in the middle towards the ends. 11.2 × 2.7 × 1 cm. Fig. 00, and Pl. 14: 16
52. Wooden seal-tablet intermediate between types A 2 and A 3, with three saw-grooves on bottom of cavity; the opposite end is a little slanting. 9.3 × 2.4 × 1.5 cm. Pl. 14: 18
53. Material for ditto of type A 2, with two saw-grooves running across near one end, but the piece between them not removed. 8 × 2.2 × 1.5 cm
54. Complete ditto of type A 2 with spots of Chinese ink on the front. 12 × 1.8 × 1.1 cm
55. Wooden object, somewhat similar to an ordinary seal-case, but very thin and with unplaned back. 7.2 × 1.1 × 1.4 cm
56. Ditto, broader, and fragmentary. 7 × 2.8 × 1.7 cm
57. Small spade or large spatula of wood. The handle is straight with oval section, the blade slightly concavo-convex widening towards thin fore-end; the edges slightly rounded. 28 × 6.6—2.1 cm, Th. at handle 1.7 cm. Pl. 7: 12
58. Wooden spoon-shaped spatula, with curved blade and handle, the former rounded at back, the latter chamfered and with end cut to a point. 21.1 × 3.7 cm. Fig. 18: 16, Pl. 7: 14
59. Ditto, the blade slightly rounded on the back, fore-end convex, and handle broken off. A large *wang* (Mathews 7037) has been roughly incised on back of the blade. 13 × 3.3 cm
60. Ditto with rounded edges and round handle, fore-end of blade a little convex. 17.2 × 2.9 cm
61. Ditto with broken-off handle. (12.9) × 3.8 cm
- 62-64. Three frs. of dittos
65. Material for ditto, handle flattened oval in section. 16.6 × 2.5 cm
66. Fragm. of a small ditto, similar to nos. 60—64
67. Ditto, made of a thin slip, slightly bent along its longitudinal axis, blade broad and rectangular. 17.3 × 2.5
68. Ditto with handle broken off. (12.6) × 3.5 cm
69. Large ditto, blade rectangular and flat, handle round in section and slightly S-curved in the horizontal plane. 25.5 × 3.1, diam. of handle 1—1.3 cm
- 70-71. Two frs. of thin dittos
72. Small, narrow ditto, successively thinning towards fore-end of the blade; handle is slightly curved and has a pointed end. 16.4 × 1.1, Br. of handle 0.5 cm
73. Roughly carved ditto, blade oval in outline, parts of blade and handle missing. 16.3 × 2.7 cm
74. Fragm. of bamboo chopstick with traces of lacquer in black and red. L. 11.8 cm
75. Fragm. of bamboo chopstick. L. (18.5) cm
76. Complete ditto. L. 22.2 cm
- 77-80. Four short bamboo sticks, all of same length (13.6 cm), possibly chopsticks (?)
81. Wooden "face-peg" roughly made of a split branch, back being ridged with upper part of the peg rhomboid in section. Nose-ridge and -notch; the lower end pointed. Face contours painted in black, and the mouth, eyes and hair filled in with red colour. Fig. 21: 12
82. Ditto, longer and narrower but of the same section, the nose-notch being very small and trapezoid in outline. Face painted black only. 24.6 × 2.3 cm. Fig. 21: 3
83. Fragm. of ditto, the lower part (probably pointed) missing. Section similar to that of the previous ones, and nose-notch long and narrow. (14.3) × 2.8 cm. Fig. 21: 1
84. Ditto with top end broken off and charred, back flatter than that of preceding ones but not planed, and lower end roughly pointed. (20.2) × 3.4 cm. Fig. 21: 13
85. Material for ditto, consisting of a semi-circular peg, pointed at one end, a little carved on bulging front with a broad "nose-ridge" from top to about middle of peg, where a small, nearly semi-circular "nose-notch" is cut. 26.2 × 2.5, Th. 1.3 cm
86. Wooden "face-peg", broad, thick, with worn-out painting and much decayed. The nose-ridge is slightly widening towards "chin" notch, round which the front is cut in three facets down to the pointed lower end (which is now blunt). Back a little vaulted. (20) × 4.4 cm
87. Material for ditto (?); a rather large peg with flat back, curved in the horizontal plane, front with "nose-ridge" on upper third part, below which the front is cut three-sidedly down to the pointed lower end. Bark remaining on the edges, back unplaned, no painting. 23.8 × 3.5 cm
- 88-93. Six small wooden prisms, possibly dice, some of which are partly painted black. L. 3.5—1.7, Br. 2.3—1.3, Th. 2—0.9 cm
- 94-95. Two small wooden pieces, one with a semi-circular projection at one end, the other nearly cut through by a saw-groove near one end. Fragm. of and material for seal-case ? 4 × 2.2, and 3.4 × 3.1 cm
96. Short wooden peg, one end rounded; the other is broader, cut straight off, and black

- with Chinese ink, which extends 0.5 cm up on the sides. For scratching ink-powder ? L. 1.4 cm
- 97-98. Two cut-off pieces of wooden slips, one end obliquely and sharply cut; perhaps used as implements (there are several specimens of this kind in the collections, some of which can hardly have been only refuse). L. 4.9 and 3.5; Br. of no. 97 3.6 cm. Fig. 20:12
99. Cut-off piece of bamboo slip
100. Rectangular wooden piece, probably part of carpenter's square, made of same hard fine-grained wood like most of the Han-combs; a small rectangular (broken-off) tenon at one end. Across one of the broader sides are four parallel incised lines at an average interval of 2.5 cm. The narrow-sides and one end show traces of red colour.
(Cf. e.g. *I.A.*, Pl. LXXXIX, Ast. IX. 2. a. 08.) 10.3 × 2.3 × 1.1 cm. Fig. 18:2
101. Small sawn-off piece of round peg with tapering groove along short-ends, painted blue-black and showing traces of having been bound with a broad twisted band (the traces are reddish brown). L. 3.9, diam. 2.5 cm
- 102-103. Two rectangular pieces of wood.
L. 23.5 and 21.2 cm
- 104-109. Six wooden slips, probably "stationery".
L. 25.1—11.8 cm, Br. 3.4—2.1 cm
110. Rectangular wooden piece with lenticular section, one end semi-circular and the other broken off; has been painted red.
13 × 2.7 × 1 cm
111. Rectangular nearly knife-shaped wooden slip, unsymmetrical "cutting-edge" towards one end. 11.1 × 2.6 × 0.6 cm
112. Rectangular wooden slip with four holes made in a row along one edge, the holes not quite round, one of them even square.
12.4 × 2.4 × 0.4 cm; size of holes about 2 mm
113. Rectangular wooden tablet, one end projecting and rectangular, near the other end a large round hole (diam. 1 cm). Door-bolt ? 19 × 4.9 × 1.4, Th. of raised end c. 2.2 cm.
Pl. 8:15
- 114-117. Four small "bolt-shaped" wooden tablets, simply made. Nos. 115 and 116 show traces of iron. 13—8.4, Br. 2.6—2.3, Th. of raised end 2.7—1.5 cm
118. Ditto with a large rectangular hole through the thinner part near its end, which is roughly chamfered; the raised part rather low and short. 10.6 × 2.6 × 2 cm. Pl. 8:19
- 119-120. Two short dittos, fragmentary
121. Ditto with long raised part of nearly semi-circular section and a narrow, deep groove at the upper end of it. 13.4 × 2 × 1.5 cm.
Th. of projection 1.4 cm
122. Ditto, its raised part slightly tapering and with a small hole drilled through.
13.2 × 1.9 × 0.9 cm. Pl. 8:16
123. Wooden stick of uneven thickness with a long projection on one edge.
19.5 × 1.8 × 0.9 cm
124. Wooden hook, probably for attaching to a wall, consisting of a roughly carved peg with deep, slanting notch towards one knob-like end, the other end cut straight. The edges are roughly chamfered; the section rectangular. 15.1 × 2.6 × 3.5 cm. Pl. 8:1
125. Ditto, more carefully made with oblong section except at a pointed end, which is square.
17.5 × 1.4 × 2.6 cm. Pl. 8:2
126. Ditto similar to the previous one, but smaller and simpler. 15.1 × 1.2 × 1.4 cm
127. Ditto, with large knob. 13 × 0.9 × 1.6 cm
128. Short wooden peg, fragmentary (one side broken off), larger part polygonal, the rest with square section and cut slightly oblique towards the pointed end.
L. 10.7, diam. 1.5 cm
- 129-130. Two nearly identical wooden polygonal pegs, ornamental parts of pieces of furniture (?). One end square; between this and the opposite, pointed end the peg has rhomboid section and is slightly curved. A round tenon in the middle of the straight, square end. No. 129 has a notch near the pointed end. L. 18.8 and 17.3, Br. 1.8 and 1.6, Th. 2.1 and 1.1 cm. Pl. 12:13, 14
131. Flat wooden object, nearly crescent-shaped, with rather large hole drilled through one end, chamfered edges. Used as a swivel?
9.4 × 3.2 × 1.5 cm. Pl. 10:8
132. Wooden peg with rectangular section, and concave long-sides. One end is roughly rounded and has a hole, the other end being cut off straight. (Cf. Pl. 11:11—12.)
12 × 1.8 × 1 cm
133. Short rectangular wooden piece with one side concavely cut. 10 × 1.5 × 1.4 cm
134. Similar peg with both sides unsymmetrically concave. Spots of Chinese ink.
12.4 × 1.5 × 1.5 cm
135. Fragm. of wooden seal-tablet (?) broken off across the cavity; made of a thin, narrow tablet with front slanting from seal-notch towards the opposite end. 15.5 × 1.6 × 1.1 cm
- 136-138. Three rather thick wooden slips with V-shaped cuts in the edges, fragmentary. No. 137 is made of hardwood and is notched at the middle of one edge; at one end it has broken-off rectangular tenon. No. 138 once

- had a Chinese character.
L. 12—10, Br. 2.8—1.3, Th. about 0.6 cm
139. Fragm. of wooden rectangular object, with one end cut narrow to a tenon, which has a broad groove near the end with spots of ink. Coarsely made. $7 \times 2.3 \times 0.7$ cm
- 140-141. Two frs. of wooden slips, probably pendent labels, with notch near one end in the edge. Broken off lengthwise, so the notch possibly had its counterpart, for string-fastening. L. (11.5) and 7.1, Br. (1.4—1) cm
- 142-145. Four more or less fragmentary wooden pendent labels with remaining pair of edge-notches near one end. No. 145 is complete. $10.2 \times 1.1 \times 0.4$ cm
- 146-147. Two dittos of bamboo, nearly identical, with a pair of notches in each edge at one end, the other end roughly cut off. L. 19.2 and 18.2, Br. 0.9 cm. Pl. 12:2
- 148-149. Two short slips, one of bamboo, the other of wood, both pointed at one end. L. 8.8 and 9.3, Br. 1.5 and 1.8 cm
150. Longitudinal fragm. of wooden peg; one end planed down to half thickness and triangular in outline, painted black on front and partly on the edges. $(15.5) \times 2.5 \times (1.1)$ cm
- 151-152. Two short wooden slips, one end obliquely cut off and a little convex. No. 152 has a rather large hole passing obliquely through the convex end. Sharp edges. $7.1-6 \times 2.1-1.9 \times 0.4 \times 0.6$ cm. Fig. 20:11
153. Fragm. of wooden slip with one straight edge, the other curved and tapering towards one end, which is bluntly pointed and round in section. $(11) \times 2.2 \times 0.8$ cm
154. Wooden peg with triangular section, pointed at one end. Probably material for wooden "face-peg" similar to A.8:II;82. A little bent in the horizontal plane. $23 \times 1.8 \times 0.8$ cm
155. Small wooden peg with rounded section, cut off obliquely at one end, which has a flat surface. Line-marking stylus? L. 11.9, diam. 0.5 cm
156. Wooden peg with oval section. L. 23.3, diam. 0.7 cm
157. Ditto with round section. L. 23.3, diam. 0.9 cm
158. Ditto with semi-circular section. $16.6 \times 1.4 \times 0.6$ cm
159. Irregularly carved peg, fragmentary. $13.5 \times 1.4 \times 0.7$ cm
160. Peg with round section, a notch around near one end (for fastening of strings?). L. 15.7, diam. 1.2 cm
161. Ditto, round section, pointed at one end. L. 15.2, diam. 1.2 cm
162. Wooden slip, one end broad and thin, the other with square section. $15.2 \times 1.5-0.7 \times 0.4-0.8$ cm
- 163-165. Three wooden wedges made of hard wood, fragmentary. L. 9.8—7.2, Br. 2.5—1.1, Th. 1.4—0.8 cm
- 166-167. Two wooden pegs with square section except at one end, which is round and tapering (tenon?). $8.8 \times 0.9 \times 0.7$ and $16.4 \times 1.3 \times 1.2$ cm
- 168-169. Two wooden pegs, one with rectangular section and slightly chamfered edges, the other with round section and a carving on the middle part (for fastening a string?). L. (20) and 17.5, Th. c. 1.5 cm
170. Two largish wooden objects, probably door-bolt sticking in its holder. The latter part is rectangular with square section and a rectangular hole through the middle; size $27.4 \times 3.5 \times 3$ cm. The bolt consists of a pointed peg, widening towards one knob-like end; it is inserted into the hole of the rectangular piece, but does not fit very well, as the hole is much broader than the peg; size $23.8 \times 2.2 \times 1.4$ cm. Pl. 10:3
171. Flat wooden piece, one half rectangular, other half broader and nearly square in outline, also thicker and with the short end worn. L. 13.3, Br. 3.2 and 5, Th. 0.7—1 and 1.6 cm. Pl. 8:18
- 172-174. Three wooden tablets, roughly worked and probably unfinished. L. 5.6, 14.8 and 24.2 cm
175. Segment of circular wooden disc, probably bottom of cylindrical container with wall made of a pane. In the convex edge there are two small holes near each end, and in one of the holes is a small wooden dowel. One side painted black. All edges well smoothed. $17.7 \times 4.1 \times 0.7$ cm
176. Roughly worked wooden block, possibly leg of tray, or table, with a rectangular notch deeply cut in one end, perpendicular to the longitudinal axis. $13.8 \times 5.5 \times 4.7$ cm
177. Fragm. of rectangular wooden block, part of larger object. At one end a square tenon flush with one narrow-side; through middle of block, nearer to the other (broken-off) narrow-side, there is a rather large hole with an inserted peg; perpendicular to this peg two similar ones are inserted into the narrow-side, these holes ending on a level with the broad-side hole and on each side of it. Size of block $7.3 \times (3.7) \times 2.3$, L. of tenon 2.6, sides c. 1 cm. Diam. of the holes 6—7 mm
178. About half of a roughly rectangular wooden block with a tenon at one end. Remaining broad-side is split along its median line for

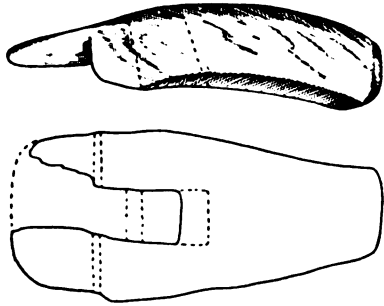


Fig. 26. Wooden cross-piece of an adze-handle, A. 8: II; 179, Pl. 10: 12. Scale 1/3.

nearly 7 cm from the free end; perpendicular to this is a large, semi-circular hole through middle of narrow-sides near the end; edges of broad-side are chamfered. Through the tenon (rectangular in outline and section) there has also been a large round hole, parallel to the split. $14.3 \times (3.3) \times 4.2$ cm

179. Wooden cross-piece of handle for socketed adze or hoe-blade, consisting of a block with rectangular section, and chamfered edges, bent lengthwise from narrow, thick end towards the other end, which is broad and wedge-shaped. A rectangular hole runs obliquely through the broad-sides, narrowing at the upper, convex surface. The base of the thin end shows traces of wear, as does also the narrow end of the block (butt-end?). Split between hole and fore-end. $15 \times 6.6 \times 3.6$ cm. Fig. 26, and Pl. 10: 12
180. Wooden cylinder-shaped club-head, pierced by a rectangular hole near the middle, and with two rather broad raised bands, round one end and the middle (partly including the hole); between the bands there remain bits of iron from a hoop, which has been 2 cm broad and 2 mm thick. The carved end a little oblique and worn, and between it and one corner of the hole a crack, perhaps once the reason for attaching the hoop. Between the other end and the hole, parallel to the latter, is driven an iron nail. Hard wood. L. 10.5, diam. 5.4 cm. Pl. 10: 4
- 181-182. Two bamboo sticks, pointed at one end. No. 182 is well made. L. 11.1 and 15, Br. 0.7 and 0.6 cm
183. Narrow segment of wooden comb, widening towards the teeth, of which there are 16, covered with red paint, which extends about 1 cm above the base of the teeth. Similar to A. 8: I; 312, but upper part less carefully made. Line-marker? $7.4 \times 1.1 \times 0.6$ cm
184. Smallish wooden cone-shaped object, the pointed end divided by grooves into three points, the grooves extending nearly to the base of the cone. H. 7.2, diam. 2.7 cm. Fig. 5: 6
185. Sawn-off disc of oval-sectioned wooden branch. $4.2 \times 3 \times 1.6$ cm
186. Roughly made wooden object, consisting of round base with round tenon carved out of one side. L. 6.2, tenon 4 cm, diam. of base 2.8, and of tenon 1.2 cm
187. Small wooden cleat with round section; the ends raised. L. 4.4, diam. 2.4 and 1.7 cm. Pl. 10: 7
- 188-189. Two frs. of wooden pegs projected at one end. L. 7.9 and 8.3, Br. 1.6 and 2.6 cm
190. Small L-shaped wooden object, in two parts, possibly some kind of beater or hammer; the longer and narrower handle part is inserted into the narrow-side of the other near one end. Hard wood. Head $5 \times 1.9 \times 0.9$ cm, handle $9 \times 1.2 \times 0.6$ cm. Fig. 19: 17, and Pl. 13: 11
191. Small wooden peg with rectang. section and rounded tenon at each end. $7.4 \times 1.2 \times 0.8$ cm
192. Small rectangular wooden tablet with a tenon at each end. $7 \times 1.7 \times 0.3$ cm. Fig. 20: 5
193. Small wooden peg, probably unfinished ornamental piece, with a deep notch near each end. The ends taper a little, and one slants on the back of the notch. $8.2 \times 1.1 \times 1.2$ cm. Fig. 5: 4
194. Small flat wooden object, one edge straight with a small notch at the middle, the other edge convex. A hole drilled through near the notch. $4.5 \times 1.2 \times 0.6$ cm. Fig. 20: 3
195. Miniature scoop of wood of unique form and size. Straight handle level with the rim of a round, hollow bowl, the cavity of which has been made by a three-pointed (?) centre-bit of a drill or lathe. Unfinished and partly damaged. L. 6.3; size of handle $4.7 \times 0.8 \times 0.5$; bowl, H. 1.1, diam. 1.7, Th. of wall c. 0.2 cm. Fig. 27
- 196-197. Two fragmentary, flat wooden pieces with a hole through the middle, one end tapering and thicker like a handle. The two objects may have matched each other, crossing at right angles. L. (4.6—6.5), Th. 0.4—0.5 cm

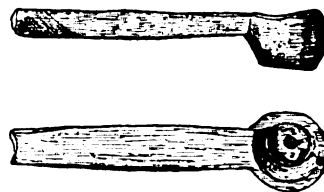


Fig. 27. Miniature scoop of reddish brown, fine-grained wood, A. 8: II; 195. Unfinished and damaged. Scale 2/3.

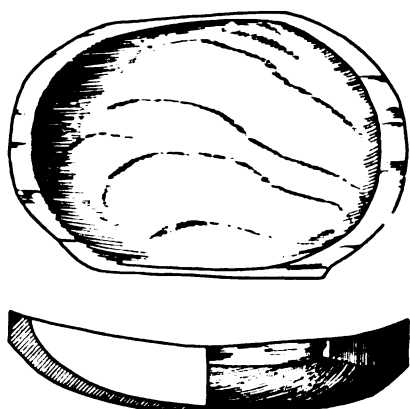


Fig. 28. Wooden bowl, A. 8: II; 200, the lug-handles broken off. Scale 1/3.

198. Small wooden tablet, pointed at one end, semi-circular and broader at the other end. $6.1 \times 1.9 \times 0.4$ cm
199. Small, partly charred object of wood; one side straight and the other convex. Through thicker part near the middle, a hole with remaining peg. $2.7 \times 0.9 \times 1.1$ cm
200. Wooden bowl, roughly carved in one, oval, low, with bulging back and convex outer side to about half of height, the upper part straight and vertical to the rim ("boat-shaped"). At one long-side traces of handle, now broken-off and charred, which has been level with the rim; at the opposite, very charred rim indistinct traces of (shorter ?) $15.7 \times 10.5 \times 3.9$ cm. Fig. 28
201. Half of lower part of wooden bowl, of the common rough, oval type. Clumsily made; a groove across surface of back; traces of dark brown paint (?) on inside. L. 13.7, H. (2.2) cm
202. Piece from wall of wooden bowl, which has been oval with convex side. Probably similar to no. 200; traces of same kind of dark brown coating as on nos. 200 and 201. L. 13.1, W. about (2.5) cm
203. Fragm. from back of wooden bowl of the smooth, oval type, similar to A.8: I; 429, which was a little larger. Traces of red lacquer on the inside. L. of base 7.5, of whole fragm. 9.5 cm
204. Fragm. of wall of bowl similar to no. 203, side rather thin. Traces of red lacquer on inside and black lacquer on outside. L. 13.1 cm
205. About a third of rather small wooden bowl, a variety of the smooth, oval type with low side and raised base; thin wall. Lacquered

bright red on inside and black or dark brown on outside, the latter colour extending into the inside as a narrow rim border. Exquisitely made. Actual size $(6 \times 8.3) \times 3.5$ cm; reconstructed size $14 \times 10 \times 3.5$ cm.

Fig. 29

206. Small fragm. of wooden bowl, probably similar to no. 205. Portion of wall around edge of nearly circular base, lacquered red on inside and black on outside. 2×1.5 cm
207. Piece from rim of upright wooden wall of cylindr. vessel; thin pane, on in- and outside lacquered black with red designs; the concave outer side of rim is red, and below this are two thin, red, parallel lines; part of a Chinese character in red extends into an aperture of the lower thin line. Inside, red lines and two small circles. L. (5.5), W. (2) cm
208. Fragm. of thin wooden lamella, one side slightly vaulted and lacquered black. The lacquer is thick compared with that on bowls. Lamina of armoured coat ? $(5.4) \times 3.7 \times 0.1$ cm
209. Wooden bowl of the rough oval type, clumsily made. Larger part of one handle is missing: the handles are considerably thicker than e.g. those of A.8: I; 416 and top sides lack the usual portion at rim. Indistinct traces of lacquer (or paint?) on both sides. $17.5 \times 14 \times 5.8$ cm
210. Lug-handle of wooden bowl of the rough, oval type, lacquered red on inside, painted black on outside with "pea-pod" design in red lacquer. 9.3×2.6 cm
211. Fragm. of lug-handle of wooden bowl, lacquered red on both sides. (6×1.3) cm

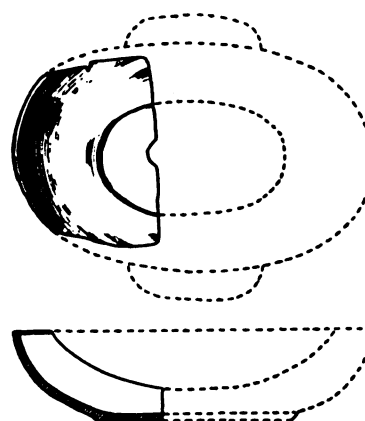


Fig. 29. Fragmentary wooden bowl, A.8: II; 205. Lacquered red on the inside, black on the outside and along the interior rim. Scale 1/3.

212. Complete ditto, rather small, lacquered black except on the inside of bowl, which is lacquered red; some kind of substratum. Partition furrow at rim. 7.5×1.6 cm
213. Ditto, black-lacquered with red-lacquered ornaments, best preserved on the outside. Decoration on the outside: a zigzag line between two pairs of longitudinal lines, the spaces being filled with concentric circles. Traces of same pattern on top of surface. 9.2×1.8 cm
214. Small bronze fitting, consisting of a hollow cube with a (broken-off) 8-sided tube in one end and a narrow, square and tapering tenon in the other end. $4.7 \times 1.5 \times 1.3$ cm
215. Copper coin, *Ta-ts'üan-wu-shi*, well preserved. Diam. 26.5 mm. Pl. 4: 11
216. A *Wu-shu* coin, well preserved. Diam. 26 mm
- 217-218. Two corroded *Wu-shu* coins, on one the *shu* is only partly visible, and on the other hardly more than a *Wu* is recognizable
219. Socketed spade-blade of iron, base of socket rectangular and straight, vertical section of blade triangular, end-sides and cutting-edge slightly convex. Very rusty. L. 17.5, W. 5.8, Br. of base 1.9, Th. of material c. 0.4 cm. Fig. 51, and Pl. 5: 13
220. Slightly bent iron rod with nearly round section, rusty. L. 13.5, diam. 1.4 cm
221. Two pieces, together forming half of a broad, hexagonal iron ring, very rusty. Size of enclosed space may have been about 4.5×5.8 cm; Br. of sides 2.8—3.4, Th. of material 0.6 cm
222. Strongly corroded iron fitting with thick walls, nearly square section, with one side slightly convex, a little tapering towards rounded, closed end. The cavity extends through most of the object, ending 1.4 cm from closed end; the section of the cavity is nearly trapezoid, its size being 1×1.3 or 1.2×1.5 cm. Size of object $7.3 \times 4—3.3 \times 3.5$ cm. Fig. 67: 2
223. Coarse rope of veget. fibre, s-tw. of z-twisted strands and formed into two loops bound round with the rope itself. L. 75 cm (See Sylwan 1949, p. 27)
224. 1-18. Frs. of partly sewn silk in different qualities and colours: brown, buff, green, bluish green, blue, red and vermillion; no. 9 consisting of two different strips laid together and pleated; no. 17 frs. of taffeta and figured silk in compound warp rep; silk wadding, tangled silk mass; no. 18 fr. of poss. a bag of veget. cloth with 55 cm long strand of tangled silk mass attached (Sylwan, p. 27)
225. Handle of a much worn broom, consisting of a bunch of grass, the ends of which are bent together and tied with strings of two different kinds. L. about 22 cm. Pl. 17: 14
226. Part of handle of broom consisting of a straight bunch of grass tied round with strings. L. about (18.5) cm
227. Horn-core, of antelope, sawn off at both ends. L. 8.5 cm
228. Shoe woven of soft hemp-strings, of rather unique type with high tight-fitting shaft. Worn through at the toes. About $26 \times 13 \times 10$ cm, shaft c. 10 cm
229. Fragm. of string sandal. L. (20), Br. c. 11 cm
230. Fragm. of sandal made of twisted strips of silk and strings. Br. 10 cm
231. Sole of shoe or sandal, a thin layer of rush held together by six longitudinal, parallel strings. L. about 24, Br. 9.5 cm
232. Rectangular mat, plaited of coarse strings; when found the piece was folded three times. One end is covered with a piece of skin, sewn on with strings; the other end is torn off. Near this latter end there are three pairs of longitudinal scores, 3.5 cm long, possibly for fastening of straps. One side painted. L. c. 58, Br. 12.5 cm. Pl. 16: 7
- P. 4:
22. Long wooden stick with semi-circular section, at one end a slanting and chamfered projection from the flat side. Writing and pattern of winding lines cover whole surface of flat side including slanting side of the projection. L. 24.7, Br. 1.4, Th. 1 cm; L. of projection 1.8, Th. 1.7 cm
- P. 45:
1. Wooden seal-tablet of type A 4, the seal-cavity ($3.4 \times 2.7 \times 1.1$ cm) having a longitudinal hole on level with bottom. The widening lower wedge-shaped part is covered with writing on front and one edge. $17 \times 3.9 \times 2.6—0.4$ cm
- P. 105:
1. About half of oval wooden bowl of the rough type, red-lacquered on inside, painted black on outside, with red-lacquered "pea-pod" design on remaining handle. Rather damaged. L. about 14.5, H. 5 cm
4. Wooden seal-case of type 1 b, $4.5 \times 3.6 \times 2.3$, L. of cavity 2.5 cm
- 5-8. Four seal-cases of type 1 a. Measurements, see above P. 477: 7, p. 65

- 22-23. Two identical and complete wooden combs of the ordinary Han type, with teeth of medium thickness.
7.7 × 5.6 × 0.9 and 7.6 × 5.9 × 0.9 cm
- P. 174:
31. Narrow wooden tablet (tally ?) with two "seal-cavities" between the middle and the ends (similar to Pl. 14: 24); indistinct writing on the front. 22.4 × 1.3 × 0.9 cm
- P. 175:
20. Semi-circular wooden peg with seal-cavity 4.5 cm from one end on flat side. Probably simple seal-tablet of type A 2. 13 × 2 × 1.5 cm
- P. 198:
5. Fragm. of similar seal-tablet, broken off at the seal-cavity. Written address on the front. (7.2) × 2.3 × 1.8—0.5 cm
- P. 208:
3. Wooden seal-case of type 1 or 2, the short ends chamfered, writing on the back. 6.2 × 3.2 × 1.6 cm
5. Fragm. of wooden seal-tablet of type A 4, with traces of writing on front of the lower part. L. 19, Th. 2.8—1.5, L. of cavity 2.6 cm
6. Fragm. of ditto, similar to no. 5, with writing on the front. L. 6.9, Th. 1.8—0.7, L. of cavity 3 cm
- P. 260:
23. Fragm. of lower part of seal-tablet, type B 3; large and small characters written on the front. Hard wood. Th. 2.2 cm
- P. 289:
16. Long, square bamboo stick pointed at one end, and with a pair of gashes in the edges near the other end. 21.5 × 0.7 × 0.6 cm
- P. 325:
2. Bottom of plaited semi-spherical cane basket. Rather broad vertical strips serve as framework for horizontal fibres, which are finer. The plaiting simple
5. Small fragm. of earthenware vessel with mat-like cord-impressions; blue-grey paste. Small hole drilled through
6. Ditto, with very indistinct traces of oblique cord-impressions, interrupted by two effaced zones around
7. Fragm. of small, round wooden lid, half of which projects. Similar to A. 10: I; 23. Diam. 4.2 and 3.4, Th. 2.2 cm
8. Fragm. of wooden comb with fine teeth. L. 7.1, Th. 0.4 cm
- P. 328:
1. Wooden seal-tablet, type intermediate between A 2 and A 3. The seal-cavity 1.4 cm from top end, its length being 3.1 cm. Size of whole tablet 13.2 × 2.5 × 1.4 cm
2. Rectangular wooden tablet with two projections, one at one end (L. 3.8 cm) and the other (L. 3.5 cm) beginning 4.7 cm from the other end. Part of iron nail driven into the latter projection. Total L. 2 cm
- P. 490:
1. Wooden seal-case of type 1 a with two extra saw-grooves across bottom of seal-cavity, explaining "sawn-off" characters on the projections. 6.2 × (3.6) × 1.5, L. of cavity 3.1 cm
2. Wooden seal-case of type 1 a. Measurements, see above Pek. coll. 477: 7, p. 65
3. Roughly made wooden seal-tablet of type A 2, the edges naturally rounded, the cavity near one end and the back carved with a knife. Indistinct traces of writing on the front. 12 × 3.2 × 2.2 cm; L. of cavity 2.8 cm
6. Rather coarse wooden slip, label, with round hole through 4.5 cm from one end. Fragmentary, with traces of writing. (21.7) × 2.7 × 0.4 cm
- Locality II A 1 (upper stratum)*
- A. 8: II A;
1. Fragm. of wooden seal-case with two grooves. Th. 1.7 cm
2. Small wooden prism, poss. from seal-case, almost severed by a groove running across one side. 2.2 × 1.3 × 1.1 cm
- 3-9. Seven wooden seal-cases of type 1 a. L. 5—4.3, Br. 2.9—1.7, Th. 1.9—1.3 cm
10. Wooden seal-tablet of type A 3. A longitudinal hole through raised top end to cavity, on a level with bottom of the latter. 8.8 × 3.5 × 1.8 cm. Pl. 14: 17
- 11-13. Three small wooden slips, 5.5—4.1 × 3.6—2.5 cm
- 14-15. Two nearly identical wooden tablets, one end cut oblique and with V-shaped furrow in the edge. 10.2 × 3.8 × 0.4 and 9.7 × 4.5 × 0.4 cm
16. Wooden peg, rectangular section, one end obliquely cut and black with ink, which extends towards the middle. The other end worn by blows. Near the middle of the peg there are two pierced holes, crossing each other. 14.7 × 1.7 × 1.4 cm
17. Wooden chopstick, cut off in olden times. L. 15 cm
18. Wooden spatula, roughly carved; rounded handle at a slightly obtuse angle with broad, straight-ended blade. 17.8 × 3.8, diam. of handle 0.9 cm
19. Wooden tablet with chamfered edges, tapering towards one end, which is thinner. 21 × 2.5 × 0.5 cm

20. Largish wooden implement, consisting of a slightly curved peg with round section in one half, the other half cut into a knife-shaped edge. L. 28.5, diam. 1.5 cm. Pl. 11:9
- 21-22. Two wooden slips. L. (10.8) and 27.1 cm
23. Fragm. of wooden board with highly raised end, an open rectangular notch in one corner, and a round wooden dowel through the middle perpendicular to the notch. Another, larger, hole at centre of the board. Hard wood (also the dowel). 16.5 × 4.5 × 3.5 cm. Fig. 19: 19
24. 1-7. Frs. of silk and silk padding, partly from garment, in various shades of brown, yellow, red, blue-green and blue; no. 1 frs. of two fronts: the outer cloth of blue silk, interlining of padding, lining of natural silk. Rope of veget. fibre (See Sylwan 1949, p. 27)
- P. 23:
1. Part of rim of wooden dish, which has been round in outline with a black-painted, 2.5 cm high, upright side. The rest of the dish unpainted and rather roughly carved, especially the bottom. Diam. c. 17.8 cm
 2. Wooden "face-peg" or material for such, of thin branch of poplar tree, partly burned. No painting visible. 25 × 3.3 cm
- P. 144:
1. Wooden seal-case of type 1 or 2, medium size; clay seal remaining, its legend probably unreadable. Traces of strings under the clay
 - 2-6. Five wooden seal-cases of type 1 a, of medium sizes. No. 3 has a black dot on one of the projections
 7. Fragm. of wooden comb of the common Han type, with coarse teeth. Th. 0.7 cm
 8. Ditto, with fine teeth. Th. 0.5 cm
 5. Fragm. of wooden seal-tablet or tally, consisting of a long round peg with a 2.8 cm long cavity 11 cm from the top end; between cavity and this end the slightly slanting, flat surface is covered with writing. Lower part of the peg largely broken away. L. (31.4), diam. 2.7 cm
- P. 283:
8. Short wooden tablet with four notches in one edge, two of which are near each end on one broad-side. The other side covered with writing, partly cut away
- Locality II A 2 (lower stratum)*
- A. 8: II A;
- 25-27. Three wooden seal-cases of type 1 a, medium sizes
28. Ditto with a groove across the middle of the notch, with traces of the seal clay. 5.2 × 2 × 1.5 cm. Pl. 14: 11
- 29-32. Four fragmentary seal-cases of type 1 a, medium sizes
33. Fragm. of ditto with an oblong hole pierced through bottom
 34. Fragm. of seal-case or seal-tablet, with a longitudinal hole through the longer projection. 6.1 × 2.7 × 1.9 cm
 35. Small fragm. of wooden seal-case or seal-tablet
 36. Small wooden seal-tablet of type A 3. 8.4 × 1.6 × 0.9 cm
 37. Wooden tablet, perhaps seal-tablet; rectangular, with a shallow cavity near the middle, below which the front has chamfered edges. 14 × 3.1 × 1.1 cm. Fig. 19: 12, and Pl. 14: 23
 38. Wooden spatula, broad handle of rectangular section with convex end. 14.3 × 3.5 × 0.3 cm
 39. Larger ditto, fragmentary
 40. Ditto with long, narrow blade, slightly concavo-convex in section; handle broken off
 41. Narrow wooden slip, a little spatula-shaped. 14.1 × 1.3 cm
 42. Fragm. of flat wooden object, one end broad and round in outline, with two notches in one edge; broken off at the handle-like narrow end. (10.2) × 3.5 × 0.5 cm. Fig. 19: 5
 43. About a third of a wooden comb of the usual Han shape and fine-grained material, the teeth intermediate in size between the two commonest sizes. Nearly as large as A. 8: II S; 75. 6.8 × (1.7) × 0.8 cm. Pl. 13: 4
 44. Very small spatula-shaped wooden implement, made of same fine-grained hardwood as most fine-toothed combs. Small, pointed oval blade with straight-shouldered base; handle straight and widening towards the free end, where a round hole is drilled through, and string inserted. Well smoothed. Unique. 5 × 0.7 × 0.15 cm. Pl. 8: 5
 45. Small object of horn, one side flat and the other roughly carved. Rectangular outline except at one end, which is rounded and pointed. Unfinished ornament? 5.7 × 1.2 × 1 cm. Fig. 5: 7
 - 46-47. Two wooden prisms, fragmentary or unfinished. One with a rectangular tenon at one end, the other with chamfered edges at one side. 4.3 × 3.3 × 2.1 and 2.7 × 3.7 × 2 cm
 48. Small wooden slip, one corner rounded. L. 3.3 cm
 - 49-53. Five small wooden tablets or prisms, of which no. 51 is red and no. 52 partly black in colour
 54. Thin wooden ring, broken in several pieces, from rim of cylindr. container with upright wall made of a bent pane, lacquered red on both sides. The outside has decoration of two parallel black lines, at three places on the lower line interrupted by a simple design: three

- curved lines over a large round spot.
Diam. c. 13, Br. c. 1.3, Th. 0.15 cm
55. Rectangular wooden block with chamfered edges, with two large round holes through the broad-sides, and with pegs of oval section inserted. One of the pegs is fragmentary and has a groove across top end. Size of block $9.8 \times 5.1 \times 3.2$ cm. The complete peg: L. 11, diam. c. 1.2 cm. Pl. 11: 10
 56. Large wooden handle of ladle or scoop, well made. The free end projects on front with triangular section and concave ridge, the front below the projection being straight and vaulted, the back flat and curved lengthwise. L. 15.7, Br. 2.8, Th. at knob 4, otherwise 2.9—2.3 cm. Pl. 6: 5
 57. Large wooden fragment of rectangular object, with one end projecting; near this end the edge of one broad-side has seven small notches. Partly painted black. (15.5×5) cm
 58. Fragm. of gourd vessel, with two drilled holes, one of which is stopped up with a wooden dowel
 59. Large fragm. of oval wooden bowl of the rough type, similar to A. 8: II; 209, except that the handle is lower and without rim-furrow. L. c. (15.5) cm
 60. Wooden peg, thickening towards one end, which is semi-circular and painted black. The edges chamfered. $13.5 \times 2—0.8$ cm. Fig. 18: 5
 - 61-63. Three wooden pieces, charred and fragmentary
 64. Narrow bamboo stick, chamfered edges, sharply pointed at one end. Stylus ? 15.1×0.6 cm
 65. Wooden stick, long and thin, tapering towards both ends. L. 30, diam. 0.6 cm
 66. Fragm. of roughly carved wooden stick, chopstick ? L. (14.3) cm
 67. Wooden slip with a 11.5 cm long notch in one edge. $20.4 \times 1.5 \times 0.4$ cm
 68. Short wooden slip, obliquely cut at one end. $8.7 \times 2.8 \times 0.2$ cm
 - 68-70. Two wooden slips, "stationery". $23.6 \times 2.3—2 \times 0.4—0.3$ cm
 71. Wooden peg, poss. material for face-peg, with one side flat, the other with three surfaces on upper half; lower part rounded and with bark remaining and pointed end. $26.7 \times 2.2 \times 0.7$ cm
 72. Wooden "face-peg" with triangular-sectioned upper part, "nose-notch", pointed lower end, bark remaining on back. The painting has almost disappeared. $19.5 \times 3.2 \times 1.9$ cm
 73. Large "face-peg" of a coarse, unique form. Upper part triangular in section; at middle three sides carved to a "waist"; bark remaining on the lower, pointed part. Insignificant traces of black painting $24.5 \times 5.3 \times 2.3$ cm. Pl. 15: 6
 74. Long wooden implement, with one end formed to a handle with oblong section, the other part thin and with lenticular section and knife-sharp edges. L. 42, Br. 3.4—3.2, Th. of blade 1 and of handle 2 cm. Pl. 11: 8
 75. Copper coin, *Wu-shu*. Diam. 26 mm
 76. About half of a socketed iron hoe-blade, U-shaped, similar to A. 8: I; 449. Very rusty. H. c. 11.5 cm, original Br. prob. c. 13, Th. of material 0.4, W. of hollow stem 2.3 cm
 77. Fragm. of slightly curved iron hoop, very rusty. Even thickness (4 or 5 mm), rectangular outline with one end a little broader and curved. 7.5×4.7 cm
 78. 1-12. Frs. of silk in brownish natural shades; a cord of raw silk tied into a ring, diam. c. 14 cm (no. 10); sewing-silk and silk wadding; frs. of cloth, mat and ropes of veget. fibres (See Sylwan 1949, p. 27)
- P. 21:
2. Short wooden seal-tablet or seal-case, with the 2.4 cm long cavity at middle. Traces of small characters on both projections. $7 \times 2 \times 1.7$ cm
 4. Fragm. of semi-circular peg, seal-tablet or tally, with cavity at the broken-off end, which is slanting, and with writing on the flat front beneath the cavity. $(15) \times 2 \times 1.7$ cm
 5. Fragmentary wooden seal-tablet of type A 3, rather short. Indistinct writing on front and back. $9.3 \times 2.3 \times 1.7$ cm
- P. 64:
7. Burned-off bamboo chopstick, L. (21) cm
 8. Strongly charred rectangular wooden piece. One broad-side has three somewhat obliquely cut notches across the surface, and one edge a pair of V-shaped notches between the three already mentioned. $(16.5) \times 3.5 \times 2.2$ cm
 9. Wooden "face-peg" with a "nose-notch" apart from the painted nose, closer to the mouth. Indistinct painting in black. 21×4.1 cm
 10. Ditto made of a branch of poplar tree, partly with remaining bark. 22.3×2.5 cm
 11. Broad ditto without "nose-notch". 20.8×4.6 cm
 12. Ditto with "nose-notch" and with nearly extinct painting. 19.8×3.1 cm
- P. 112:
17. Longitudinal fragm. of wooden seal-tablet, with a 2.5 cm long cavity near one end, and traces of writing on front of both projections. The front beneath the notch a little slanting, the specimen intermediate between types A 2 and A 3. L. 6.4, Th. 1.4 cm
 18. Wooden seal-case of type 1 a, with writing on back and on the two projections. $5.5 \times 2.8 \times 2$, L. of cavity 2.9 cm

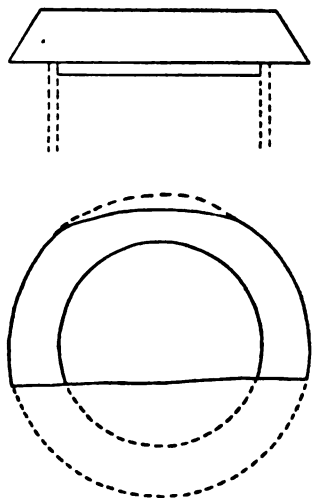


Fig. 30. Fragmentary wooden cover of small vessel, A. 8: II C; 2. The under-side is lacquered red, the other surfaces black with irregular spots of red. Half size.

Locality II B 1 (upper stratum)

P. 167:

9. Upper part of a wooden "face-peg" without "nose-notch". Black painting. Br. 2.5 cm

Locality II C 1 (upper stratum)

A. 8: II C;

1. Small container consisting of a sawn-off bamboo stem, a joint forming the bottom. Some kind of coating on the inner surface. H. 3.4, diam. 3.6 cm. Pl. 6: 15
2. Fragm. of rather small carved wooden circular lid with slanting edge, and a circular, 0.3 cm high elevation on the larger side. The surface of the elevation lacquered red; the rest has been lacquered black and shows streaks and irregular drops of red lacquer on the top surface and slanting edge. Diam. of main part 6.3 to 8 cm, of elevation 5.3. Total Th. 1.8 cm. Fig. 30
3. Fragm. from base of oval wooden bowl of the smooth type, somewhat similar to A. 8: II; 205, but coarser and larger, besides being ornamented in black lacquer on the red-lacquered inside and vice versa on the outside. The designs consist of fine lines, dots, concentric circles and a cruciform "flower". Size about $6.5 \times 6 \times 0.8$ cm. Fig. 31
4. Wooden seal-case of type 1 a, with an unfinished drill-hole at middle of bottom of cavity. $4.2 \times 2.6 \times 1.6$ cm
5. Ditto, without hole, $4.4 \times 2.5 \times 1.3$ cm
6. Ditto of type 1 b. $4.1 \times 3.1 \times 1.4$ cm

7. Small wooden slip with a tenon at the middle of one end, slightly vaulted. Spatula with broken-off handle ? $3.8 \times 2.1 \times 0.2$ cm. Fig. 20: 2
8. Fragm. of curved wooden tablet or board, pierced with 3 large, round holes along the median line; the object broken off across one hole at broadest part. $11.3 \times 3 \times 1$ cm. Fig. 19: 13
9. Rectangular wooden piece of hard wood. $7 \times 1.7 \times 0.7$ cm
10. Small wooden slip, possibly scraper; one edge nearly straight and sharpened from both sides, the other edge with obliquely cut corners. $6.3 \times 1.8 \times 0.4$ cm

P. 70:

1. Longitudinal fragm. of wooden seal-tablet of type A 5. Coarsely made of hard wood. Indistinct traces of writing on the front. L. 19.7, Th. about 2.2 cm

Locality II D

A. 8: II D;

1. Small flat wooden ornament, consisting of an oblong, carved upper part above a square base; the latter has obliquely chamfered edges at the bottom for wedging into a rectangular hole. The two incised, horizontal partition-lines shown in Pl. 12 are lacking on "back". $4.7 \times 1.7 \times 0.45-0.65$ cm. Pl. 12: 4
2. Triangular wooden top-ornament (?), consisting of a cone with slightly convex sides, and a broken-off oval tenon at the base. Made of hard wood. Traces of red painting and irregular black spots at the base. H. 3.5 cm without tenon, W. of the sides 1.9 cm; L. of tenon (0.5), diam. 0.8—0.6 cm. Fig. 5: 5
3. Fragm. of red-coloured wooden stick, charred. $(3.7) \times 1.6$ cm

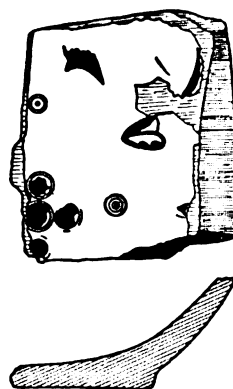


Fig. 31. Base of a lacquered wooden bowl, A. 8: II C; 3, which has probably had lug-handles. Inside (above) has black designs on red ground, outside a reverse arrangement. Half size.

4. Long wooden stick, the edges carved with irregular notches, giving the peg a zigzag shape. One end broad. Unfinished ornamental piece ? $23.7 \times 2.4 \times 0.6$ cm. Pl. 13: 17
 - 5-7. Three wooden seal-cases of type 1 a, roughly made of twigs, partly much decayed. $4-3.7 \times 1.8-0.8 \times 1.1-0.8$ cm
 - 8-10. Three fragmentary bolt-like wooden pieces, of which no. 10 has the projection cut obliquely on one side. L. $7.5-4$ cm
 11. Rectangular wooden tablet with one end projecting into a socle. The under-side of the latter is at a slightly obtuse angle to the main piece which, however, stands firmly; by carving from all sides the tablet is thinnest and narrowest at the projection. Rather roughly made. Tablet part $9.6 \times 4 \times 1$, Th. of socle 1.7 cm. Fig. 19: 11, and Pl. 8: 13
 12. Bamboo stick, charred at one end, $(13.4) \times 1.1$ cm
 - 13-14. Two bamboo "toothpicks". L. 10 and 9.2 cm
 - 15-16. Two rounded pegs, pointed at one end. L. 11.2 and 10.8, diam. 1.1 and 0.8 cm
 17. Wooden spatula, small and thin, blade nearly oval, handle broken off. $(8.3) \times 2$ cm
 18. End fragm. of wooden handle, possibly of ladle, with a fairly large oval hole near the intact, free end. 5.5×2.1 cm
 19. Rectangular wooden piece with rectangular hole through the narrow-sides, which taper towards one end, where there seems to have been a thin tenon. One broad-side with remaining knot and otherwise partly naturally rounded. Leg of food-tray ? $10.5 \times 2.8 \times 3$ cm
 20. Small lug-handle of wooden bowl of the common oval type. Lacquered black except on inner side, where red lacquer begins 0.5 cm below the rim. Between actual handle and rim the usual groove, thus marking the rim. L. 6.8, H. 1.1 cm
 21. a. Socketed iron spade-blade, rectangular, with rounded corners and slightly convex cutting edge; triangular section. Very rusty. Fig. 51. $17 \times 4.5-4.7 \times 2$ cm. Th. of material 0.4 cm
 21. b. 1-6. Frs. of silk, wadding and veget. cloth, partly from garment: no. 5 is a rectangular piece of buff silk with silk padding and lining of veget. cloth, and also a cord twisted of silk fabric and veget. cloth; no. 6, cord of veget. fibre (See Sylvan 1949, p. 27)
 22. 1-6. A fr. of natural silk (no. 6), and frs. of cloth, cord and thread of veget. fibres (Sylvan, p. 27)
- Locality II E*
- A. 8: II E;
1. Wooden peg with about oval section, one half of the peg more rounded than the other. Hard wood. $15.5 \times 1.9 \times 1.1$ cm
 2. Rectangular wooden tablet, with a 1 cm long projection at each end, one of which is broken. $15.4 \times 2 \times 0.9$ cm
 3. Wooden object similar to the previous one, but roughly carved; has had one of the projections shorter than the other. $14.5 \times 3 \times 1.7$ cm
 4. Fragm. of simply made wooden spoon-like spatula, the blade bent upwards. $(13.5) \times 3.2$ cm
 5. Fragmentary D-shaped wooden piece, possibly ear-handle of vessel. One edge nearly straight and broken off, the other convex with a large, oval hole near the edge. One end more than twice as thick as the other end. 12.5×2.5 cm
 - 6-7. Two wooden spatulas, nearly rectangular in outline, made of thin slips. L. 18 and 18.8, Br. $2.7-2.5$, Th. 0.3 cm
 8. Bamboo stick, rounded, a notch near one end. L. 19.8, diam. c. 0.5 cm
 9. Bamboo stick, pointed at one end. 16.7×0.6 cm
 10. Bamboo brush. L. 13.9 cm. Fig. 18: 15
 - 11-16. Six wooden seal-cases of type 1 a, mostly fragmentary. L. $5.5-3.5$, Br. $3.6-2.1$, Th. $1.9-1.3$ cm
 - 17-19. Three coarse seal-cases of type 1 a, made of twigs. L. 3.7, 5.7 and 7 cm
 20. Peg with half-round section, tapering towards one end and with a "seal-cavity" in the other end, where it has been sawn off in olden times. L. 16.5, diam. 2 cm
 21. Peg with square section, planed off at one end. $9.7 \times 1 \times 1.1$ cm
 - 22-24. Three wooden bolt-shaped pegs, the projection of the third one slanting towards the end. L. $13.5-8$ cm
 - 25-26. Two small wooden pieces
 27. Short bamboo slip with five grooves across the back at irregular intervals of about 1.5 cm. 10.3×1.6 cm
 28. Short wooden object, rectangular section, one end wedge-shaped and rounded into a point, and one broad-side partly painted black. $9.3 \times 1.4 \times 0.8$ cm
 29. Wooden "face-peg", pointed oval section with front smoothed, the lower end pointed. Rather distinct features on the black-painted face. $20.3 \times 3.1 \times 1.5$ cm. Fig. 21: 4, and Pl. 15: 4
 30. Ditto with triangular-sectioned upper part, "nose-notch", pointed lower end, traces of black and red painting. Much decayed. $20.2 \times 4.2 \times 1.5$ cm

31. Small piece of material for "face-peg", without painting. Triangular-sectioned upper part, "nose-notch", pointed lower end.
16.8 × 2.5 × 1.1 cm
32. Peg made out of a split branch, pointed at one end, a roughly cut notch in one edge.
L. 17.2 cm
33. Fragm. of lower part of rather small oval wooden bowl or drinking-cup, thin-walled and smooth, with slightly raised back; the outside black- and the inside red-lacquered.
(8 × 5.5) cm
34. 1-6. Frs. of brownish natural and wine-red silk and sewing silk
(See Sylwan 1949, p. 27)

P. 99:

8. Bronze arrow-head of the common triangular type, with a 6 cm long, strongly corroded iron tang. L. 2.8, W. of sides 1 cm

Locality II W

A. 8: II W;

- 1-3. Three wooden seal-cases of type 1 a.
5.8—2.4, Br. 3—1.6, Th. 1.2—0.9 cm
4. Half of a wooden comb of ordinary Han type, narrow teeth. Hard wood. 7 × 3 × 0.6 cm
5. Half of ditto, with coarse teeth. Partly similar to A. 8: II A; 43. 7 × 2.6 × 0.4 cm
6. Ditto with broken-off teeth. Nearly identical with A. 8: I; 310 and A. 21: I; 5.
4.3 × 2.6 × 0.6 cm
7. Small spatula of bamboo, the rectangular, straightly cut-off blade naturally vaulted, the handle burned off. 7.1 × 1.7 cm
8. Fragm. of small, angular wooden tablet with a groove sawn across the middle, partly painted black. 3 × 2.4 × 0.7 cm
9. Wooden slip or tablet, carefully pointed at one end. 12.7 × 1 × 0.3 cm
10. Bamboo stick, 9.5 × 1.3 cm
11. Short wooden slip of hard wood, rectangular, a large triangular notch at the middle of one edge. 5.2 × 0.9 × 0.2 cm
- 12-16. Five wooden slips, "stationery". Three are charred at one end.
L. 16.8—7, Br. 1.2—0.9, Th. 0.3—0.2 cm
17. Fragm. of a wooden bowl, from the part of the wall where it turns into the under-side; rounded side, probably of type similar to the oval, "boat-shaped" bowl A. 33: 5; 20. The inside red- and the outside black-lacquered, the latter with indistinct traces of ornaments in red. L. about (7) cm
18. Fragm. of wooden bowl of the rough, oval type, also from wall just beneath a missing handle. Inside lacquered red, outside black and red (only some small spots remain). L. (10) cm
19. Handle of wooden bowl, similar to handle A. 8: II; 213, with traces of lacquering in black with red ornaments: concentric circles between a pair of parallel lines. L. (9) cm
20. Fragm. of shrunken wooden bowl, of the rough, oval type, of about the same size and with the same painting (e.g. "pea-pod" pattern on outside of handle) as A. 8: I; 416.
L. about (13) cm
21. 1-8. Frs. of silk, prob. from a garment. Outer cloth of green and blue silk, interlining of coarse brownish natural silk, and lining of brownish natural silk; a button covering is sewn on to one fragment. Silk wadding.
(See Sylwan 1949, p. 27)

Locality II N

A. 8: II N;

1. Thin round bamboo stick with one end pointed; toothpick? L. 10.8 cm
2. Short bamboo peg, pointed at one end.
11 × 1.1 cm
- 3-4. Two segments of a bamboo tube. L. 10.3 cm
5. Short, round wooden cleat (cf. Pl. 10: 7), rather roughly but symmetrically carved. One end is nearly spherical. L. 5.4, diam. 1.2 cm
6. Slightly bent wooden peg tapering towards one end and with a cylindrical knob at the other end. L. 11.5, diam. 1.7 cm
7. Wooden tap or plug with a 1.5 cm high cylindrical knob at one end, slightly tapering towards the other end. Near the narrow end a 4 cm long, flat notch. Well made.
L. 7.8, diam. 2.6 and 1.6 cm
8. Wooden spatula, short blade with convex end, broad and successively narrowing handle, which is slightly bent upwards. 16.3 × 4.1 cm. Fig. 18: 9
9. Small wooden prism, 2.8 × 1.7 × 1.3 cm
10. Small wooden tablet, 4.1 × 2.6 × 0.3 cm
11. Ditto with two notches in each corner, the front a little vaulted. 6.2 × 3.3 × 0.5 cm.
Fig. 20: 14
12. Fragm. of wooden seal-case, type 1 or 2.
5.1 × 0.6 × 1.4 cm
13. Wooden X-shaped tongue for joining parts of a coffin or box. Two ends straight, the narrow-sides between them slanting at obtuse angles towards the middle, below which one half is about twice as thick as the other. The whole object is bent a little at an obtuse angle, so that the straight ends are oblique in relation to the longitudinal axis. Unique in this collection. A common device in Han time (cf. e.g. Harada 1930, fig. 7) as well as today.
8.7 × 5 × 1.3 cm. Fig. 19: 6, and Pl. 10: 13

14. Nearly rectangular wooden piece, unfinished; one end projects at both sides, the other has a round hole through. $7 \times 3.4 \times 1.9$ cm
 15. Fragm. of prob. hexagonal wooden peg. L. (11.6) cm
 16. Fragm. of label, consisting of narrow wooden slip with a pair of notches in the edges at one end for fastening of string. $(3.8) \times 1 \times 0.2$ cm
 17. Thin, bulbiform wooden ornament, drop-shaped in outline. One side is nearly flat and has been lacquered red, the other side is vaulted and has been lacquered red. Base end cut off obliquely. Well made. $7.2 \times 4 \times 0.8$ cm. Pl. 13:7
 18. Narrow, rectangular comb of bamboo with 9 very long, rounded teeth. $13.1 \times 1.2 \times 0.15$ cm. Pl. 13:8
 19. Wooden slip with one end semi-circular and with clay left on it, and also a little worn. $22.7 \times 2.3 \times 0.4$ cm
 20. Wooden rectangular stick of uniform breadth and with five incised lines crossing it at intervals of 2.3—2.4 cm beginning at one end, the other end broken off. Traces of black paint on all sides, and of red colour in the grooves. Part of coarse measuring-stick or material for wooden prisms ? $22 \times 2 \times 0.9$ cm. Pl. 13:19
 21. Fragm. of rectangular wooden peg, with rectangular section and cut into several projections and notches. $18.4 \times 2 \times 1.5$ cm
 22. Wooden peg with triangular section and one end pointed. Hard wood. $12 \times 1.7 \times 1$ cm
 23. Wooden peg with one rectangular, raised end, tapering towards the other, pointed end. $17.6 \times 2 \times 1.8$ cm. Fig. 19:4
 24. Rectangular wooden object, possibly door-bolt, planed off to half its thickness from middle towards one end, and with a hole through the thicker part near the end. $15.6 \times 2.5 \times 1.5$ cm
 25. Short wooden "face-peg", rather unsymmetrically made, with traces of face in black lines. Upper part triangular in section, lower part planed off and slanting towards the pointed end. 15.2×2.2 cm
 26. Flat wooden peg tapering towards one end. Probably material for "face-peg". $22.8 \times 2.8 \times 0.8$ cm
 27. Bamboo stick, 19.6×1 cm
 - 28-29. Two identical, thin bamboo sticks. 23×0.7 cm
 30. Bronze arrow-head, corroded, with traces of iron tang, of common triangular type but rather long, the edges blunt. L. 3.8, L. of head 3.2, W. of sides c. 0.9 cm
 31. 1-4. Frs. of brownish, green and sky-blue silk, silk wadding, and a braid of grass
(See Sylwan 1949, p. 27)
- P. 48:
6. Fragm. of wooden seal-case of type 1 or 2, belonging to a group of such with the following measurements:
L. 5.6—4.1, Br. 2.6—1.4, Th. 1.1 cm
 13. Unusually large and roughly made wooden seal-case of type 1 a. Traces of writing on the projections. $7.3 \times 3.5 \times 3.3$, L. of cavity 3.2 cm
- Locality II S 1 (upper stratum)*
- A. 8: II S;
1. Small, oblong wooden object, with slightly concave longer edges, the section rectangular at the ends and oval at the middle; in one end a round tenon with a small wedge inserted into the end. Hard wood. $4.8 \times 1.2 \times 0.7$ cm. Pl. 12:7
 - 2-4. Three small wooden prisms, of which no. 4 might have been used as a die.
Size $2.8—1.4 \times 2—1.4 \times 1.8—1.1$ cm
 5. Small bamboo peg, broken off at both ends, with close ink lines across the outside. $(7.5) \times 0.8$ cm
 6. Square wooden peg with a groove near one end. $7.4 \times 1.4 \times 1.3$ cm
 7. Fragm. of wooden seal-case of type 1 a. L. 5.1 cm
 8. Small wooden seal-tablet (?), the front slanting from the cavity towards the lower end. $6.2 \times 1.7 \times 1.5$ cm
 9. Roughly carved wooden seal-case (?) of type 1 a, one end a little slanting. Fig. 20:1
 10. Short wooden seal-tablet with cavity near the middle, painted black on the edges. $6.2 \times 1.7 \times 1.5$ cm
 11. Wooden seal-case of type 1 a, with unsmoothed back. $6.5 \times 2.7 \times 1.8$ cm
 - 12-19. Eight more or less fragmentary wooden seal-cases or seal-tablets some of which are charred
 - 20-21. Two chopsticks of bamboo, L. 22 and 12.8 cm
 22. Very thin bamboo stick, L. 11.5 cm
 - 23-24. Two fragmentary wooden spatulas with rounded handles, and broad blades with convex end. L. (14.7), Br. 4.4 cm
 - 25-30. Six frs. of wooden spatulas of different shapes and sizes, all rather small. Some of the blades are rounded on back
 31. Bamboo stick with semi-circular section. 14.5×2 cm
 32. Bamboo stick, one side flat and the other side vaulted, pointed at one end, the other end broken off across a hole. 14.2×0.9 cm
 33. Fragm. of coarse, comb-like wooden implement, rectangular. Intact end raised and slanting 5.5 cm and cut into three "teeth", the middle one being wound round with a string. The other end has also had three "teeth", only one remaining. $19.8 \times 4.4 \times 1.5—0.9$ cm. Pl. 11:2

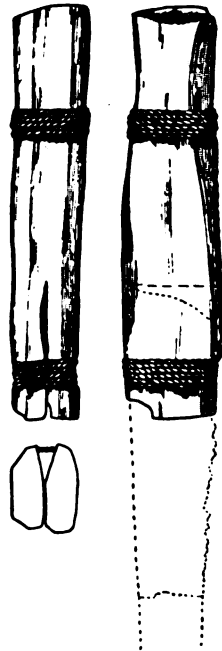


Fig. 32. Wooden handle of foxtail saw (?). A. 8: II S; 35, Pl. 10: 1. Dotted lines show possible arrangement of the iron saw-blade in Pl. 5: 12. Scale 1/3.

34. Fragm. of wooden object with lenticular section, one end broken off, the other intact and convex. About 6.5 cm from the latter end there is a carved groove across the back.
(9) \times 3.2 \times 1 cm
35. Handle of foxtail saw (?), consisting of a rectangular, oval-sectioned wooden piece, roughly carved, with the thinner end split up to about $\frac{1}{3}$ of the length. A groove is cut round this end for attachment of a string; this string runs on one narrow-side towards the other end, near which it is bound a second time.
L. 16.5, diam. about 3.5 cm.
Fig. 32, and Pl. 10: 1
- 36-37. Two frs. of rectangular wooden pieces with notches. No. 37 has a tenon inserted in a rectangular hole near one end. L. 10.5 and 15.5 cm
38. Fragm. of oblong wooden object of multilateral form, all intact surfaces painted black. Slightly curved with square section; one end wedge-shaped, the other end planed off c. 4 cm and hollowed out to a depth of 1.9 cm. Unique. L. 13.4 cm, the sides near the straight end c. 2 \times (2) cm. Fig. 19: 15
39. Wooden piece with rectangular section, one edge straight, the other having a notch near each end. In the notches, and across one broad-side are some traces of iron, probably from a pair of iron hoops, which may have held this piece together with some other object.
11 \times 1.8 \times 1 cm
40. Fragm. of wooden stick with three grooves at one end. L. 15.2 cm
- 41-44. Four "bolt-shaped" wooden tablets, with more or less slanting projections. Two are charred, one shows traces of iron. L. 18.7—5, Br. 3.4—1.9, Th. 2.5—1.1 cm. Pl. 8: 20
45. Wooden stick of semi-circular section, with one end raised and slanting as in the previous ones. 25.5 \times 1.5 \times 1.9 cm. Pl. 8: 21
46. Ditto, rectangular section; one end marked by a notch in all four edges. 24.5 \times 2 \times 1.1 cm
47. About half of an oval wooden bowl of the rough type, similar to A. 8: II; 209, except that the handle is lower without depression on top surface. Traces of black paint or lacquer on the outside. A small hole is drilled through the bottom. Partly charred. L. 15.5 cm
48. Ditto, less than a half remaining, similar to A. 8: I; 416 (same size and painting, also "peapod" pattern on handle, but better made). The black on the outside extends into the inside as a narrow rim-line over the red surface.
L. 13 cm
49. Smaller fragm. of ditto, from short end of bowl. The red lacquer on inside covers black painting. L. 5 cm
50. Ditto, prob. from same bowl as no. 49.
L. about 4 cm
51. Ditto from base of bowl like A. 8: I; 416
52. Small ditto, from side near rim. The inside lacquered red, the outside lacquered black with red concentric circles between parallel lines.
L. (2.3) cm
53. Two frs. of a copper coin, probably a *Wu-shu*
54. Fragm. of iron plate, slightly tapering towards one semi-circular end. Very rusty. Point of iron sword?
L. (10.9), Br. 2.9—1.8, Th. c. 0.3 cm. Pl. 5: 4
55. Fragm. of iron plate, one side slightly convex, the other side flat with turned-in, raised edges, with notches at two points. The surfaces show traces of hammering, the edges of filing.
10 \times 4.3, Th. at middle 0.4 cm. Fig. 67: 4
- 56-57. 1-16. Frs. of partly sewn silk in various shades of brown, blue, blue-green, etc.; no. 13 toe part (?) of sole, of twisted weave of strips of silk in different colours and strands of grass, W. c. 10 cm; objects of vegetable fibres; three cords, a piece of plait, and (no. 16) a bundle of one coarse cord, packed in loops bound round 8 times with the rope itself and fastened with another loop, one free and forming another smaller bundle (See Sylwan 1949, p. 27)



Fig. 33. A complete writing brush, (A 8: II S)
P. 1: 1, with bamboo shaft. Half size.

P. 1:

1. Complete writing-brush, top-end solid and conical, the main part of the bamboo shaft split up into four segments of uniform breadth held together at lower end by (silk ?) threads wound round; the brush-hairs are a little worn, now about 1 cm long. Total length 17.6, diam. about 0.6 cm. Fig. 33
2. Wooden seal-tablet of type A 4 with a 2.9 cm long seal-cavity at middle of the front. 13.5 × 2.3 × 1.9 cm
- 3-5. Three wooden seal-cases of type 1 a. Measurements, see Pek. coll. 477: 7, p. 65
6. Fragm. of ditto. Measurements, see Pek. coll. 48: 6, p. 78
7. Handle of oval wooden bowl of the rough type, outside black-painted, inside red-lacquered. L. 10.5, H. 1.9 cm
8. Bamboo stick, one end rounded, the other end straight and with a round hole through it. 14.5 × 1 cm
12. Wooden slip, roughly carved at one end; probably an unfinished spatula. 23 × 2.7 cm

P. 267:

6. Pointed end of wooden slat with lenticular section; traces of writing on both sides. (14.2 × 3.5) cm
29. Fragm. of semi-circular wooden seal-tablet (?) with shallow cavity 13 cm from one end, the front a little slanting towards the opposite end. Indistinct traces of writing. Br. 2.1, Th. 1.5 cm

Locality II S 2 (lower stratum)

A. 8: II S;

58-60. Three chopsticks of bamboo. No. 60, Pl. 6: 8

61. Flat wooden stick with somewhat concave ends, and a longitudinal hole (diam. 1.5 mm) through the whole piece. Split along one narrow-side, rounded edges. 12 × 0.8 × 0.4 cm
62. Wooden tablet, rectangular outline with one end slightly concave, the other end convex. Two pairs of opposite notches in the edge of one side. Well smoothed. 9.9 × 3.1 × 0.4 cm. Fig. 20: 15
63. Wooden tablet, rectangular, well smoothed, the edges slightly chamfered. 17.6 × 4.8 × 0.4 cm
64. Wedge-shaped wooden object, slightly broader towards the thinner end, which is concave. 8.5 × 4.3 × 2.2 cm. Fig. 19: 16
65. Wedge-shaped bamboo stick, tapering towards one end. 14.7 × 1.3 cm
66. Wooden peg with three sides flat, the fourth convex with chamfered edges. L. 17.5, diam. about 1.7 cm
67. Oblong wooden ornament, a little fragmentary, consisting of a board with one longer edge carved from one side into a scrolling volute. The latter is near an obliquely cut end which has formed a tenon; the opposite end cut off. Along back half of carved edge, except at middle, there are traces of red lead paint. 23.3 × 5 × 0.8 cm. Pl. 13: 18
- 68-70. Three "bolt-shaped" wooden objects, the third of which has partly round section painted black. L. 11.7, 10.6 and 13.3 cm
71. Shorter ditto, 5.3 × 1.9 × 1.9 cm
72. Fragm. of small flat tablet, with a hole through the middle at one end, one side charred. 5 × 3.4 × 0.5 cm
73. Unfinished wooden seal-case with 3 saw-grooves but without cavity, fragmentary. 5.9 × 3.7 × 2.3 cm
74. Fragm. of wooden seal-case (?), with cavity open to one side. Traces of 3 grooves, but the cavity broader and deeper than the grooves imply. 3.5 × 3.3 × 1.8 cm
75. Wooden comb of the Han type, nearly complete, with fine, narrow teeth. Made of fine-grained hard wood of the kind commonly used for combs. Cf. A. 35: 4; 2, which is nearly identical. 7.2 × 4.8 × 1 cm
- 76-80. Five small wooden pieces, partly from sawn-off larger pieces
81. Segment of thick bamboo, L. 5.6, outer diam. has been c. 3.7 cm
82. Potsherd, fragm. of fairly large, bulging vessel. Several horizontal lines cross over intersecting cord-impressions. Light greyish paste. Th. 0.8 cm. Pl. 3: 11

83. Ring-shaped game-trap, consisting of a frame of fibre wound round with twisted cords of the same material. Through this ring 17 pointed wooden sticks are driven, which meet at the centre a little below the plane of the ring; these sticks (L. 7 cm, Th. of semi-circular section 0.7 cm) widen from point towards upper V-shaped end, and have their rounded side downwards.
Diam. of ring c. 14, Th. c. 1.8 cm. Pl. 17:3
- P. 38:
16. Fragm. of wooden seal-case of type 1 or 2. Br. 2.4 cm
- Locality III*
- A. 8: III;
- 1-10. Ten wooden slips, "stationery". L. 22.9 (except one which is 22.5), Br. 1.3—1.2, Th. 0.4—0.2 cm
- 11-14. Four broader dittos.
L. 22.9, Br. 2.7—1.8, Th. 0.5—0.3 cm
- 15-27. Thirteen thick wooden slips, mostly with bark on the slanting edges. Material for "stationery" slips.
L. 23.7—22.3, Br. 2—1.4 cm, Th. 0.9—0.3 cm
- 28-47. Twenty frs., "stationery" slips, some of them burnt off
- 48-50. Three wooden seal-cases of type 1 b. L. 5.2, 5 and 3.3, Br. 3.7, 3.4, 2.4, Th. 1.6, 1.8, 1.3 cm
- 51-52. Two wooden seal-cases of type 1 a, the second one with a groove across the middle of the cavity. L. 4.4 and 5.1, Br. 2.6 and 3.2, Th. 1.7 and 1.2 cm
53. Ditto, unsmoothed, with seal clay remaining in three saw-grooves. 5.5 × 2.4 × 1.1 cm
54. Wooden seal-case with three saw-grooves, the cavity near one end, on the projections some illegible characters.
5.8 × 3.7 × 1.3 cm. The cavity 2.8 × 2.6 cm
55. Fragm. of seal-case
56. Small wooden seal-tablet of type B 2. Size 8.2 × 1.8 × 0.8 cm. The cavity 1.2 × 1.1 cm (unusually small)
57. Fragm. from rim of black-lacquered wooden bowl of type unique in the collections, the rim having on the outside a 1.3 cm thick moulding of square section. L. (6.5) cm
58. Lower end of wooden knife-sheath, made of two halves, both carved on inside for receiving a knife of same form as e.g. Pl. 6:2 b. The two parts have been glued together and wrapped with fine cloth (probably silk fabric), on which thick black lacquer has been coated. (4.7) × 2.1—2 × 0.6 cm. Fig. 20:6
59. Small wooden circular lid of vessel, with roughly carved edge and one side raised. Diam. of main part about 4.3, of elevation about 4, Th. 0.9 cm
- 60-63. Four small wooden pieces, made of twigs, more or less carved. The first one is painted black on three sides and on the ends. L. 5.9—2.7 cm
64. Fragm. of carved piece of a gourd, possibly used as a ladle. L. (13) cm. Fig. 18:3
65. Small bamboo peg, pointed at one end, the other end with projecting part of a joint. L. 7 cm
66. Piece of chalcedony
67. 1-3. Frs. of brownish natural silk
68. Wooden "face-peg" made of a flat piece, much decayed. One end pointed.
17 × 3.2 × 0.4—0.3 cm. Fig. 21:7
69. Wooden "face-peg" of common type, with triangular-sectioned upper part, and lower part cut flat (instead of a "nose-notch") down to the pointed end (now broken off). Eyes, mouth and hair have been red-painted.
27 × 4 × 1.8 cm. Fig. 21:9, and Pl. 15:3
70. Peg made of a split twig, the flat side smoothed. 23.3 × 1.4 × 0.6 cm
71. Fragm. of ditto
- 72-75. Three complete and one fragmentary wooden "stationery" slips, all with one corner cut away. L. 23—22.5, Br. 1.3—1.2, Th. 0.3 cm
76. Bamboo stick with chamfered edges, one end rounded. 17 × 1 cm
77. Bamboo stick, fragmentary, thin and narrow. (17.3) × 0.7 cm
78. Bamboo stick with two joints. 21.7 × 1.1 cm
79. Segment of bamboo with joint at one end. 8.3 × 2 cm
80. Fragm. of wooden piece, planed off at one end. 8 × 3.4 × 1.3 cm
- 81-87. Seven frs. of wooden pegs, some with oblong section (handles of spatulas ?)
- 88-92. Five frs. of wooden chopsticks. L. (13.7—5.4) cm
- P. 27:
22. Fragm. of wooden seal-tablet or tally, consisting of a semi-circular peg with a small shallow cavity 11.5 cm from one end. Much decayed. (18) × 1.8 × 1.4 cm
- P. 161:
8. Burnt-off piece of wooden seal-tablet or seal-case. Br. 2.4, Th. 1.5 cm
- P. 188:
14. Upper part of wooden seal-tablet or tally, similar to 27:22 above: semi-circular peg with cavity 12 cm from the intact end; between the cavity and the end the front slants and is covered with indistinct writing. Br. 2, Th. 1.8 cm

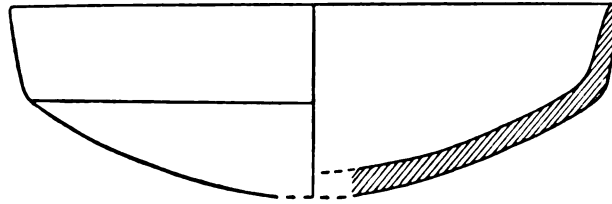


Fig. 34. Reconstruction of earthenware bowl A. 8: 2.
Half size.

P. 302:

5. Rectangular wooden block, part of structure, with 3 rectangular holes through the broad-sides. $22 \times 5.5 \times 3$ cm
7. Wooden peg of square section, one half rectangular with straight end, the other half with one side straight and the other three sides tapering towards rounded end, which is worn. (Similar to A. 10: II; 6.) $18 \times 2.2 \times 1.4$ cm

P. 304:

4. Upper part of wooden "face-peg", without "nose-notch". Traces of black and red painting. Br. 3.8 cm
5. Strongly charred wooden "face-peg", without "nose-notch". The front cut into three surfaces, now almost without any traces of painting. 24×3.7 cm

P. 309:

1. Oblong, slightly vaulted iron plate, 14.8×4 cm
- 3-6. Four *Wu-shu* coins, diam. 26.5, 25.5, 27, and 26 mm
7. Wooden comb of the common Han type, with fine, narrow teeth (a little damaged). The comb was once broader, but was later again rounded and smoothed, although rather coarsely. L. 7.3, Br. 4.4, Th. 0.5 cm
10. Bronze arrow-head of the common triangular Han type, with traces of an iron tang. The corners of the base are straight. Damaged. L. 2.8, W. of the sides 1.1 cm
- 17-18. Two frs. of wooden seal-cases, type 1 a, with a groove across bottom of cavity. L. 4.6 and 4.2 cm
22. Small wooden spatula, the blade straight-shouldered. 10.2×1.1 cm
28. Fragm. of wooden comb, the teeth fine and narrow. Th. 0.6 cm

P. 319:

1. Wooden chopstick (?) roughly made of narrow twig, fragmentary

P. 348:

4. Wooden seal-case of type 1 b. $5.2 \times 3 \times 1.3$ cm. L. of cavity 2.9 cm

5. Ditto of type 1 a, with traces of writing on back, possibly also on bottom of cavity. $4.7 \times 3.1 \times 1.3$ cm. L. of cavity 2.6 cm
6. Fragm. of ditto, type 1 a, belonging to same group as Pek. coll. 48: 6 (see p. 78 above)
8. Strongly decayed fragm. of wooden seal-tablet, type A 1. Indistinct traces of writing on front near the lower end. Nearly identical with Pek. coll. 175: 11, Fig. 17: 1

Surface finds

A. 8:

1. Roughly rounded sherd of earthenware vessel; probably used as a lid for cooking-vessel. The "outside" closely cord-marked, the "inside" black with soot. A-paste; hardness Mohs 5.5. Diam. 11, Th. 1 cm. Pl. 3: 9
2. Fragm. of low, plain earthenware bowl with nearly upright, 2 cm high rim. A-paste. Fig. 34
3. Fragm. of earthenware vessel with unusually coarse, deep cord-impressions crossing each other on the outside, the inside having weaker cord-impressions. Homogeneous, light reddish brown paste
4. Fragm. of earthenware vessel, partially rounded, with crossing cord-impressions. Homogeneous, rather well levigated, dark brown paste with glossy outer surface; hardness Mohs 6.5
5. Small fragm. of stoneware vessel with fine cord-impressions partly effaced by annular zones. A-paste with outer surface glossy and greyish brown; hardness Mohs 7.0
6. Fragm. from base of earthenware vessel with flat bottom; small hole from ancient repair. Deep straw-impressions on side and under-side. A-paste with brownish grey outer surface; hardness Mohs 5.5. Pl. 3: 10
7. Fragm. of earthenware vessel with rather deep cord-impressions crossed by several annular scorings. A-paste, on both sides as well as on

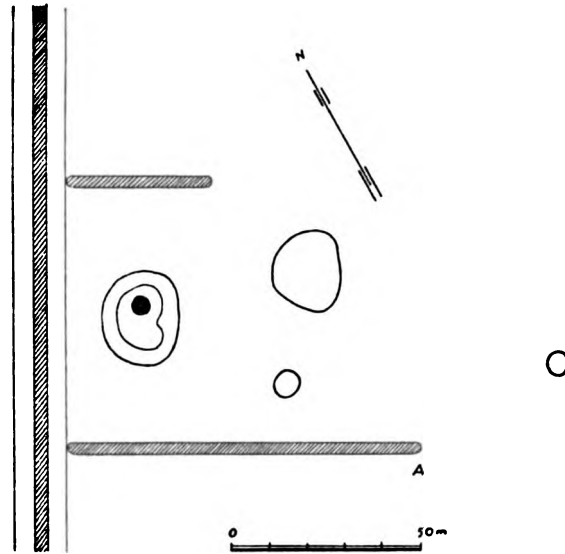


Fig. 35. Sketch-plan of Watch-tower 14 in the Tsondol Limes.
Intersecting lines = the actual tower, hatching = the
Limes *agger* and other ramparts.

- | | |
|---|--|
| <p>the broken-off edges brownish grey "sand-patina"; hardness Mohs 6.0. Pl. 3:7</p> <p>8. Small fragm. of earthenware vessel with impressed horizontal border of small lozenges. Homogeneous, reddish brown, well levigated</p> | <p>paste, with traces of dark brown, glossy coating on the outside; hardness Mohs 6.5</p> <p>9. Fragm. of earthenware vessel with obliquely crossing cord-impressions on the outside. A-paste; hardness Mohs 5.5. Pl. 3:12</p> |
|---|--|

Watch-tower 14 has decayed into a rounded mound with nearly conical profile, measuring 21×23 m at the base, and 3.5 m high. No bricks were visible. At right angles to the Limes "rampart", which runs N 30° E, and to the east of it there are two low ramparts on each side of the tower, running parallel to each other at a distance of about 60 m. The northern one is 45 m long, the southern wall being 100 m; both are 3 m broad. Inside the enclosure, and east of the tower mound, there are two smaller mounds, and outside the eastern, open side at a distance of about 100 m from the tower there is a pile of "slag" 5 m in diameter. A plan of this locality is shown in Fig. 35.

The Limes rampart is here fairly well marked by comparison with its general condition elsewhere along the line of towers. It consists of a c. 3 m broad, only about 10 cm high swelling in the coarse gravel ground; Stein's examinations of other, similarly eroded remains of Limes ramparts in Kansu make it obvious that the actual rampart consisted of gravel with cementing fascines or layers of reeds or twigs. At each side of the remains of the wall runs a very shallow trench, the width being 5 and 5.5 m respectively; in these depressions the usual coarser gravel of the surface is lacking.

Watch-tower 15 is about 4 m high and emerges from a somewhat oval mound resembling a sand-dune in profile. Some potsherds of "Han character" were seen on the ground here.

Watch-tower 16 belongs to a mound of the same shape as *Watch-tower 12*, with dune-like profile. The height is c. 4 or 4.5 m. The tower is of bricks with layers of straw between the courses.

Watch-tower P 1 is the top of a conical mound of irregular ground-plan, a little larger than the other mounds in the Tsondol Limes. The height reaches about 4 m. The following finds were collected (P. 330: 1—4): a fragment of a wooden *kien*, and small pieces of yellowish, probably natural silk, and woollen yarn.

Watch-tower A 9

The 21st tower or, if we include the site of Mu-durbeljin, the 22nd ruin from the north in the Tsondol Limes now consists of an evenly rounded mound, 3 m high. It seems probable that this tower was destroyed by fire, as there is much charcoal and soot. In a small room with thin brick walls were found the following objects of wood and iron, the former partly charred, and a piece of red silk. One wooden *kien* was also collected, but some plain potsherds of "Han character" were left on the site.

List of antiquities:

A. 9:

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Fragm. of rectangular wooden peg with a bluntly pointed head at one end.
L. (6), peg 1×1.8, head 2.3×1.5 cm in section 2. Round wooden peg, one end burned off, the other end pointed and having a triangular section. L. (13.5), diam. 0.9 cm 3. Fragm. of wooden slip, pointed at one end.
$8.3 \times 1.8 \times 0.4$ cm 4. Cut-off piece of wooden "stationery" slip | <ol style="list-style-type: none"> 5. Small rectangular wooden piece.
$4.3 \times 0.9 \times 0.6$ cm 6. Fragm. of iron implement, consisting of a 2 mm thick plate, nearly triangular in outline, which has been bent to a socketed point. Broken off at pointed end and base.
L. 10, diam. of base c. 2 cm 7-8. Two small, flat iron pieces 9-10. Two frs. of iron nails or pins.
L. 3.5 and 2.8, diam. c. 0.5—0.3 cm 11. Small piece of light red silk |
|---|--|

Watch-tower 17 is embedded in a nearly square mound and rises to about 5 m above the surrounding ground. The brick courses are strengthened by layers of straw.

Watch-tower 18 is only 2.5 m high and consists of an evenly rounded mound totally covered by black gravel.

Watch-tower 19 is an oval mound of about the same appearance as the previous one.
Height about 3 m.

Watch-tower 20 is also covered by gravel and eroded down into a round mound about 3.5 m high. On top of it stands an *obo* made of wooden material. It is situated near Butu-burukh where the Limes joins the main river-bed again.

Watch-tower 21 constitutes the 27th ruin from the north in this Tsondol Limes. It is found on the western bank of the Ikhen-gol and some four kilometres SSW of Butu-burukh; these two facts, the west-of-the-river position and the proximity to the preceding towers, are the reasons for including it in the Tsondol Limes. Properly, it belongs to another part of the ancient defensive system. The tower here is one of the most decayed ones known to us, the height not exceeding 1.5 m, and this condition may also help to explain some of the large breaches which occur elsewhere in the sequence of towers. The remains form a small, round mound with a diameter of 16 m, covered by the black gravel.

THE MÖREN-GOL LINE OF TOWERS

This chain of lookout posts is on the line of direction between the Western and Eastern Temples, west of and approximately parallel with the Ikhen-gol.

The northernmost of these ruins¹ lies west of Baller or the Oboin-gol and was called Tsaghan-tsonch ("The White Tower") or Tsonchtei-khyl according to the Mongol Arbdang who informed Bergman about the existence of this and the other ruins in the line. To our knowledge, it was visited by P. C. Chen only, who sketched its contours; it will be referred to as *Watch-tower 22*. To the SSW are situated the towers Andogen- (or Andone-)tsonch and Sain-tsonch, numbered 23 and 24 respectively, both being at a distance of about 12 km from Mu-durbeljin. They were visited by Bergman early in January 1931, and, finding that they were built of thin, vertically set bricks and consequently of recent date, "younger than Han", he did not undertake a thorough investigation of the other towers in the line, except the southernmost one, which he happened to be able to visit more than two years later. Thus *Watch-tower 25* (Mu-tsonch, situated WSW of Fort Mu-durbeljin) was probably only seen at some distance, and mapped. The last ruin (26; an unused number) in the actual line is called Ulan-tsonch and will be described below; obviously its construction differs from that of the towers 23 and 24, and there is the possibility that it did not always belong to the line.

Watch-tower 27

The southernmost ruin of the actual line of towers is called Ulan-tsonch. It was visited by Bergman early in 1934 when he was on his way to Sinkiang (the so-called Motor-car Expedition 1933—1934); on this trip he was strictly forbidden to do archaeological work, so he had to content himself with only a cursory examination of this tower during a stay in the northern part of the Edsen-gol region.

The ruined tower is situated about 4 km to the north of the Western Temple, just inside the eastern arm of the two arms into which the Mören-gol is here divided. There are also two channels, dry at least in winter, lying between the two arms and enclosing the tower. Is it just a coincidence that the present caravan-track leading to Hami leaves the Edsen-gol region a few kilometres to the north of this place, or was the watch-tower built here to guard an ancient road following almost the same direction as the modern one, or did it serve only as the left end-station of the Mören-gol Line which protected the Etsina Oasis?

The small construction is placed on the top of a natural mound; the height of the tower thus seems to be quite 5 m, although it is really only 2 m. A layer of tamarisk boughs marks the foundation of the structure. As far as could be ascertained the bond consists of alternate courses of stretchers and headers; the size of the bricks is about 30×20×10 cm, i.e. a size which is intermediate between the large bricks found in Han buildings and the small ones observed in post-

¹ I.e. the remains numbered 22—25, 27, which according to our definition form the fairly continuous "Mören-gol Line" and are placed at intervals of approximately 10, 8, 15, and 18 km. This restriction may well be over-scrupulous as there are various reasons for regarding watch-tower K 676 (Dor-tsaghan-tsonch) as the actual end of the line, and thus its true northernmost ruin (as well as that of the whole Edsen-gol region). Bergman wrote in his Report (p. 147): "Together with Dor-tsaghan-tsonch they probably constituted outposts to Khara-khoto." The distance between K 676 and tower 22 is no less than 33 km but the paucity of mapping or exploration tours hitherto carried out in these tracts of the vast gobi plains may allow us to assume the existence of a few additional remains.

Han towers as for instance Towers 23 and 24. On the top there is a square room, the wall bricks of which are burnt red by the fires once flaming here. On the southern side several poles project from the mound and are, probably, the remains of a house.

This watch-tower is stated by Bergman to be more decayed than the other towers in the Mören-gol Line.

A few pottery fragments were found lying around the tower, and they reminded Bergman of similar pieces collected by him in Khara-khoto or the Etsina Oasis. The latter being, almost without exception, of the Sung and Yüan times, there are good reasons for dating this watch-tower to the same period. At least, it was then occupied.

ANCIENT REMAINS ALONG THE ONTSEIN-GOL

Fifteen ruins and stray finds were found on the eastern side of the Ontsein-gol, outside the delta and Erego-khara-burukh areas.

The finding-places may be grouped into two different regions although no sharp distinction really exists and the distance between them is only a few kilometres. Each of the two groups have, however, once formed a part of lines of defence extending in different directions.

The main group of find-localities or other remains constitute, or were found in the neighbourhood of, a row of lookout posts running in a west-east direction between the Ontsein-gol and the northern shore of East Lake Etsina. Its proximity to the place Wayen-torei,¹ which is situated a few kilometres to the north, has been decisive for our denomination of "The Wayen-torei Line of ruins". Beginning in the west there are the following five ruined structures: the strongly built house *A 10* (a watch-station, which yielded a fairly large collection of finds), a ruined mound *K 681* (of a house or tower?), the watch-tower *A 11* (on top of the hill called Jinst), the structure *28* (possibly a watch-tower), and the watch-tower *29*. It is uncertain whether a double line of furrows in the gravel running near to and to the north of the line is to be interpreted as a badly decayed Limes rampart, or merely wheel-tracks. Large parts of this region are covered with drift-sand and consequently our two informants, Bergman and Hörner, could have missed other ruins.

The following stray finds were collected in this region, in widely separated places: *K 680* north of Hörner's camp at Wayen-torei, *K 682* and *K 683* between *A 11* and Structure *28*, and *K 684*—*686* at three different spots south of and near Watch-station *A 10*.

The remaining sites of those fifteen mentioned above constitute "The At-tsonch Line of Ruins", running near the right bank of the Ontsein-gol, which has here a NNE—SSW direction. Not far from Watch-station *A 10* this second line begins with a small ruined fort, the 30th site without collected finds. To the south follow the watch-towers *A 12* and *A 13* (the latter having the name which is used by us for the denomination of this line), and the tati *K 687*. There were no visible traces of a rampart. It is noteworthy that all four sites lie in a straight line with Walled Enclosure *K 688*, which is situated within the ancient oasis.

¹ This name should be rendered Bayan-torei according to standard Mongolian, but we have retained the form Wayen-torei in the text as this is the spelling used in most books dealing with the Edsen-gol region. Here is a halting-place for caravans arriving at the delta via the northernmost desert road.

Surface find K 680 was collected on the *sai* surface at Hörner's camp near and north of Wayen-torei.

K. 13680. Copper coin, *Huang-sung-t'ung-pao* (1038—1040). Diam. 23 mm

THE WAYEN-TOREI LINE OF RUINS

As has been stated above, this row of ancient remains consists of one watch-station house, two or three watch-towers, and a mound which may contain the remnants of either a house or a watch-tower. The two surface finds collected by Hörner east of Jinst may perhaps have some connection with structures not observed by him because of the drift-sand; such an assumption may be implied from the circumstance that there exists an irregularly large gap between the watch-tower A 11 and the watch-tower (?) 28.

Between the three westernmost ruins in the line run two parallel, scarcely visible furrows in the gravel, effaced in places by the drift-sand. Bergman hesitated for a long time before interpreting them as "probable remnants of the Limes rampart", after having considered the possibility of their being natural formations. In a letter to Bergman, who was then at Peking, Hörner describes a "Limes rampart" between these three military posts, but characterizes it as follows: "A threefold rampart so decayed that one can easily miss it in unfavourable light". According to Bergman, the furrows extend in a curve east of the house A 10 in a N 84° E direction, and thus pass tower A 11 two hundred metres or so to the north. No information is available about the dimensions of the "rampart". It is indeed far from certain that a Limes wall really existed here, and other explanations are in any case permissible; one might, for instance, assume the furrows to be wheel-tracks in a built-up roadway like the one between Tun-huang and Nan-hu (*Ser.* pp. 610 ff.), which is perhaps best in keeping with Hörner's diagnosis.

The first time Bergman visited the district round Wayen-torei was in May, 1930, when he examined ruins A 10, A 11 and 28, and made a reconnaissance digging in A 10 (finds A 10: 1—25). But this visit lasted only three days. A more thorough investigation was made in March the following year, when Bergman camped by a branch of the Ontsein-gol for nearly a month while waiting to be able to leave the Edsen-gol region. He saw Wayen-torei for the third and last time in 1933 when on the motor-car expedition to Sinkiang, but then he had no opportunity of supplementing his earlier discoveries. Earlier the same year and also during 1932 Hörner had excavated ruin K 681 and tower 29 and collected some of the stray finds.

Watch-station A 10

From various points of view ruin A 10 is the most interesting of the five in the Wayen-torei line. The finds are numerous, and the actual construction seems to differ in some respects from that of others belonging to the same fundamental type in the Edsen-gol region. The ruin lies near a dried-up branch of the Ontsein-gol in the northern part of a mound partially covered with dunes. Here and there the original surface emerges with coarse, black gravel, which may possibly conceal an accumulation of clay. On all sides of the mound extends a vast expanse of dunes.

The stronghold consists of a walled quadrangle c. 6.5 m square, with walls of large bricks raised upon a foundation of square stones. The north wall and most of the east wall have collapsed, as well as the roof, which now fills the space between the walls 1.5 metres thick. This debris is 2.5

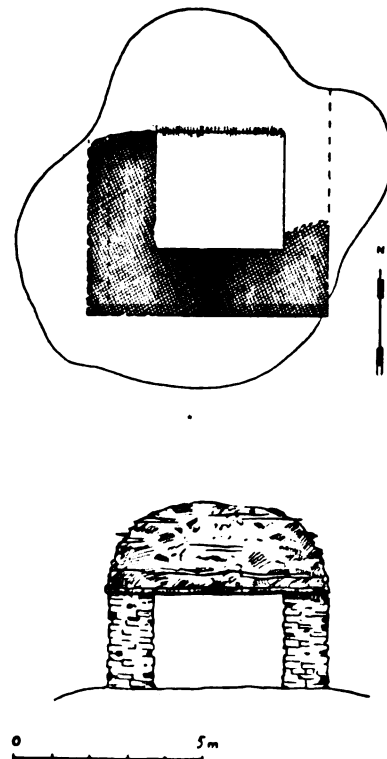


Fig. 36. Plan and reconstruction of Watch-station A 10.

m deep (the maximum height of the extant walls being c. 3 m) and consists of a thick stratum of *argal*, clay, reeds and boughs lying in several layers above substantial wooden beams. Bergman's interpretation of this is that the *argal*, and possibly the straw as fodder, had been placed on the roof to dry. The roof also contained coarse ropes as in other Han houses. The bricks are mixed with a great deal of straw and badly shaped; they are in single bond. The following sizes were noted: $43 \times ? \times 13$, $41 \times ? \times 13$, $? \times 20 \times 13$, $? \times 20 \times 12$, and $? \times 19 \times 12$ cm. Bergman made an attempt to reconstruct the building (Fig. 36), and evidently imagined a domed superstructure above the beams. This upper story, if it existed as Bergman supposed, and the stone foundation at the base of a wall made of bricks, do not occur in the other Edsen-gol houses of this massive type.

All the finds were made in the debris inside the building, either in the layers above the rafters which had supported the superstructure or roof (locality A 10: I), or in those between the rafters and the floor (locality A 10: II). Bergman kept the layers apart in his catalogue, but in his notes he makes it clear that in his view no difference in time exists between the layers, both lots being from Han times, judging from the wooden documents. There is, however, a greater risk of occasional late objects being added to the upper layer than to the lower; this circumstance cannot perhaps be altogether disregarded as there are some finds from the top layer that could be interpreted as post-Han intrusive elements.¹

¹ In his Report (p. 153) Bergman draws particular attention to a paper MS, which was later lost before the text could be translated. This piece of paper was discovered in the upper layer, above the rafters; in this case there is no need to lay stress upon the possibility of late intrusions, as this paper fragment could very well derive from the Eastern Han dynasty.

Tabulated summary of antiquities:

	Approx. number of items in		
	Test excav.	Loc. I	Loc. II
<i>Wu-shu</i> coins	1	1	—
Wooden			
"stationery" slips	2	7	—
seal-cases, -tablets, tallies	—	6	1
combs	2	2	2
containers, mostly frs.	—	2	4
spatulas	—	3	3
chopsticks	—	3	—
"face-peg"	—	—	1
drum, fragment	—	1	—
lamina of armoured coat (?)	—	—	1
knife-sheath	—	1	—
roller for windlass (?)	1	—	—
handles of implements	—	—	4
wedges, wedge-shaped objects	1	5	—
"bolt-shaped" peg	—	1	—
"clothes-hangers"	—	—	2
ornamental peg	—	1	—
various pegs, prisms, tablets, partly carved	1	41	12
Bamboo			
pegs, sticks, slips	—	10	1
tube containers	1	1	2
Cane and reed			
cross-bow arrow (with remain. head)	—	1	—
frs. of dittos	—	4	1
basket	1	—	—
Bone lamina of armoured coat	—	1	—
Antelope horn, worked	—	—	1
Whetstone	1	—	—
Earthenware or stoneware			
potsherds	5	—	—
net-sinkers	2	—	—
Bronze			
pieces (from vessel ?)	2	—	—
arrow-heads, one in the complete shaft	1	1	—
Iron			
socketed axe celt	1	—	—
knives	—	1	1
sewing-needles (in the needle-book)	2	—	—
laminae of armoured coat	—	1	1
bands	—	1	2
Leather			
water-sacks	—	1	1
knife-sheath (with one of the knives)	—	1	—
sewn pieces	1	4	1
Textiles etc. (groups)	2	4	3
e.g.			
hood of silk	—	—	1
needle-book of silk (with the needles)	1	—	—
shoe and sandal of strings	—	—	2
raincloak of strings of grass	—	1	—
clapper of grass (for polishing ?)	—	—	1
Paper fragment	—	1	—
Samples of millet	—	1	—



Fig. 37. A painted wooden board, excavated in Locality A 10: II, lower stratum, but not included in the collection from this site. Slightly rounded (front = untouched surface of trunk), about 2 cm thick and 89 cm long. Stippled = red, black = black, and blank = white. From a drawing by F. Bergman.

The following finds were left on the site: a) a very large barrel-shaped, solid wooden block with a rectangular hole through the middle; well preserved; L. 46 cm, diam. at middle 13, at ends about 10 cm, size of hole 5×3.5 cm, b) fragment of wooden wheel-nave with several spikes preserved; L. 40, W. 11 cm, c) wooden shovel, resembling A. 35: 15; 8 (Pl. 9: 11) but complete, the length being 90 cm, d) a few fragments of woven string shoes, and e) some dried-up pieces of legs and tails of horses, and f) the painted wooden board, shown in Fig. 37.

Finds from test excavation

A. 10:

1. Wooden roller, prob. of a windlass, biconical with 4.5 cm long pivots. Roughly made and worn. L. 19.5, diam. c. 5.5 cm. Pl. 10: 10
2. Round wooden peg, pointed at one end. L. 23.3, diam. 1.4 cm
3. Bamboo cylinder, closed by a joint, container, L. 14.9, diam. 1.6 cm

- 4-5. Two wooden "stationery" slips, a little charred, L. 11 and 10.3 cm
6. Wedge-shaped wooden piece, L. 6 cm
7. Socketed iron axe, rectangular, the convex cutting edge a little broader than the base. Nearly complete and well preserved, with desert patina. $9.7 \times 6.3 \times 2.5$ cm. Fig. 67: 5, and Pl. 5: 14

8. Fragm. from rim of earthenware pot; round the neck is tied a rope, the big knot forming a kind of handle. Light brown paste.
Diam. has been 11.5 cm
9. Fragm. from flat bottom of earthenware vessel, with partly effaced impressions of crossed straw on the underside. A-paste. Pl. 3:8
- 10-11. Two frs. of earthenware vessel, the outside partly covered with rather small, impressed lozenges. Brown paste turning into red towards outer surface, slightly sand-tempered, hardness Mohs 5.5. Pl. 3:4
12. Fragm. of plain earthenware vessel with a round 4 mm wide hole for suspension; or ancient repair. Light bluish grey paste turning into buff surfaces, bubbly and poorly baked
13. Fragm. of worn whetstone of slate, with suspension-hole. Br. 2.9, Th. 0.9 cm
14. Fragm. of basket, plaited of cane in several layers of plait. The framework consists of two layers, strengthened at the rim by two broad, double-folded pieces of the same plait, one piece on the outside and the other on the inside; all six layers sewn together with long stitches of strings. The pattern of the circular underside of this specimen is rather complicated (Similar to *I. A.* Pl. XLVI. T. 03). Original H. at least 10, diam. about 23 cm. Pl. 16:4
15. Piece of tanned skin with a few brown hairs remaining, and a seam along one border. 30 × 15 cm
16. Fragm. of wooden comb of the common Han type, with coarse teeth, similar to e.g. A. 8: I; 310. Th. 1 cm
17. Fragm. of wooden comb with very fine teeth, which have been fitted into the base by means of a thin tenon. Possibly similar to combs 19, 20 and 22 on Pl. 28 in Bergman 1939; unique in the Edsen-gol collections. Pl. 13:6
18. Copper coin, *Wu-shu*, well preserved. Diam. 25 mm. Pl. 4:9
19. Bronze arrow-head, triangular, of the common Han type, with plain sides. Base extends into a round, broken-off tenon, soldered and with a hole for a tang. L. 29, W. of the sides 10 mm
- 20-21. Two frs. of a bronze vessel (?)
- 22-23. Two earthenware net-sinkers of B-type. Oblong with two notches opposite each other at both ends. A longitudinal groove on each broad-side between the notches.
L. 3.4 and 3.5, diam. c. 1.1 cm. Pl. 6:16
24. Needle-book of silk patchwork in different colours, with two needles of forged iron, held together on the wrong side with a running stitch, the outer and inner side sewn separately, then laid together and edged with dark blue

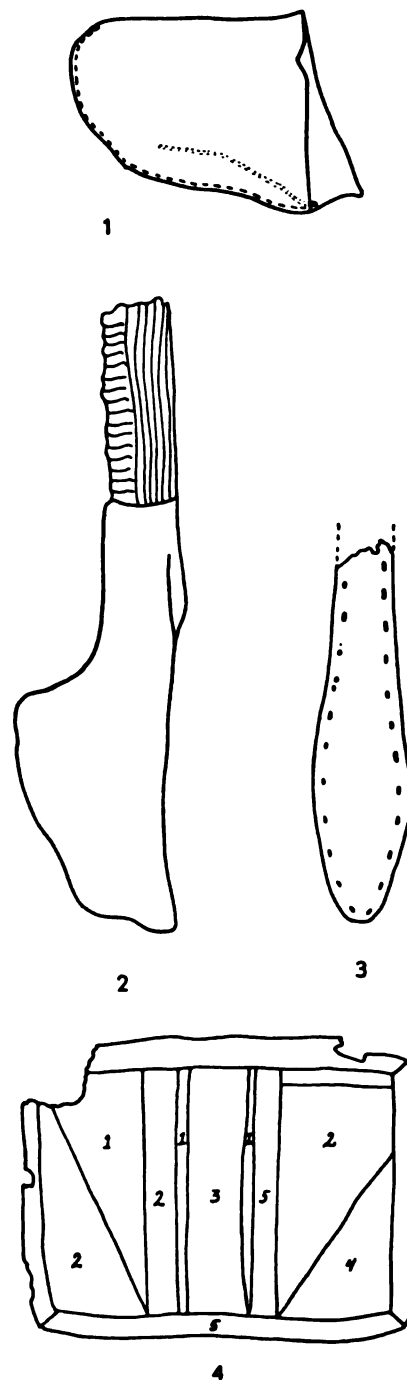


Fig. 38. A thumb-stall of vegetable cloth (1), an unidentified fragmentary object of matted felt (2), a red-lacquered, seamed strap-end of leather (3), and a patchwork needle-book of silk (4) in different colours (1 wine-red, 2 blue-green, 3 grey-green, 4 deep blue, 5 green-blue).

Scale 1/2.

1. A. 10: 25.13, 2. A. 8: I; 476.12, 3. A. 10: I; 84, 5. A. 10: 24.

green silk c. 8 mm in breadth. Colours of the nine pieces on inside: deep wine-red, green, light grey-green, deep blue, green-blue; of the three pieces on outside: deep-red (two main parts), and dark sky-blue (corner triangle). Size of needle-book 8×10.5 cm. The sewing-needles, without a single speck of rust, have a round eye bored through rounded, flattened head, and a c. 5 mm long point filed on three sides and a little curved. L. 22 and 20 mm, diam. c. 0.5 mm at middle, diam. of eye 0.8 and 0.6 resp. Fig. 38:4 (See Sylwan 1949, pp. 27 and 85, Pl. 6 A)

25. 1-16. Frs. of silk in various shades of brown, red, green and blue, silk wadding, cords, a thumb-stall of veget. cloth, and a button covering of grey-white chamois. Fig. 38:1 (Sylwan 1949, p. 27)

Finds from the upper stratum

A. 10: I;

- 1-5. Five wooden slips, "stationery". L. 23.8—21.8, Br. 1.5—0.9 cm
- 6-9. Four wooden sticks, two of which are irregularly carved
- 10-12. Three bamboo sticks and slips, no. 11 pointed at both ends. L. 22.8, 20.3 and 24 cm
- 13-15. Three wooden pegs, the last one pointed at one end. L. 22, 25 and 27.3 cm, diam. of no. 15 is 1.2 cm
- 16-18. Three wooden seal-cases of type 1 a. Two are made of hard wood and a little clumsy. No. 18 slightly charred. L. 5.4—4.6, Br. 2.8—2.5, Th. 2.2—1.7 cm
19. Thin wooden seal-tablet (?) of type A 2, cavity near one end, the lower part broader and somewhat oval in outline. Carelessly made. 10.4×2.7×0.7 cm
20. Fragm. of wooden seal-tablet of type A 2, with bark remaining on the raised end and along the edges. Rather roughly made out of a peg. Br. 1.7, Th. 1.2 cm
21. Fragm. of long wooden object (tally ?), semi-circular section with a square, open cavity on flat side, which slants towards the intact end; below the cavity the front is planed off nearly level to the bottom of the notch. (21)×2.5×2.1 cm. Fig. 17: 13
22. Lug-handle of oval wooden bowl of the common rough type. The inside is lacquered red, except for a 0.5 cm broad line along the rim, which is lacquered black like the outside. On outside red-lacquered "pea-pod" pattern. Four small holes (through one of which there is a string) bored through the wall beneath the lug proper suggest that the bowl has been repaired. L. 11 cm
23. Small round wooden disc, probably cover for vessel, raised and drawn in at half the height. The top side is carefully smoothed (varnished ?), also on its edges. Diam. 4 and 3.3, Th. 2.3 cm. Fig. 20: 7, and Pl. 6: 16
24. Wooden comb with fine teeth, of the common Han type. Well preserved though slightly charred. 7.8×5.6×1.3 cm. Pl. 13: 2
25. Fragm. of ditto, strongly charred. Similar to A. 8: II S; 75. W. 4.4, Th. 0.8 cm
- 26-29. Four fragmentary wooden pieces, three being prisms
30. Thin rectangular tablet of hard wood, slightly biconvex in section. 7.3×2.8×0.3 cm
- 31-32. Two bamboo sticks. 8.8×1.3 and 9×1.2 cm
33. Biconical, round wooden peg with a groove round the middle, in which a string remains. L. 15.6, diam. c. 1.7 cm. Pl. 8: 11
34. Wooden peg, square section at the middle, rounded towards the tapering ends, which are oval in section. Material for specimen like no. 33. 10.1×1.3×1.3 cm
35. Bamboo tube, closed by a joint; used as a container. L. 9.5, diam. 1.9 cm
36. Cut-off bamboo stem, nearly solid, with four close joints. L. 9.5, diam. 1.9 cm
37. Carved wooden peg, one end broken off. Uniform diam. (2.2 cm) to a length of 7.5 cm, and after that a deep, 0.5 cm broad notch all around, and four remaining conical "shelves" below each other. L. 16 cm. Pl. 10: 14
38. Fairly large wooden pivot (?), one end formed into a slightly conical head, the part below being round for 2.4 cm and then cut into a wedge beneath a rounded hole which is perpendicular to sides of the wedge and larger at one side. L. 21.6, L. of head 7.8 cm, diam. of head 5.3, of thinner part 3.5 cm. Pl. 10: 11
39. "Bolt-shaped" wooden tablet, roughly made of hard wood. 16.3×4.9×3 cm
40. Rectangular wooden piece, at one end slightly thicker on both broad-sides. 10.5×2.5×1.4 cm
41. Thin wedge (?) of hard wood, somewhat irregular. 14.5×2.5×1 cm
42. Small wooden tablet, one end wedge-shaped, the other obliquely cut and with a notch in one edge. Near the middle there are two notches in the edges opposite each other. Similar to A. 8: II S; 39. 8.5×2.1×0.8 cm
- 43-45. Three wooden chopsticks. L. 20.7—15.7 cm
46. Wooden spatula like slat, widening from one nearly pointed end towards thinned blade end. Strongly curved (not original ?). 21.5×2.6×0.5—0.1 cm

- 47-49. Three narrow wedges, of which no. 47 is made of a piece of wood painted black. L. 11.6—5.4 cm, Br. 1.6—1.2 cm, Th. 1.3—0.7 cm
50. The end of an octagonal peg, charred at one end
- 51-52. Two fragmentary wooden pegs, probably handles of spatulas. L. (11) and (14.4) cm
- 53-56. Four partly carved wooden pegs, one end pointed. L. 17.5—11.7 cm
57. Longitudinal fragm. of wooden piece, rectangular with chamfered edges, broken off across a round hole near one end. Charred. L. (10) cm
- 58-61. Four fairly thick wooden sticks, cut off from longer ones. L. 17.8—12, Br. 2—1, Th. 0.9—0.8 cm
62. Coarse wooden slip, similar to some of the "stationery" slips with clay-wash and traces of having been wound round with some kind of strips. Part of framework of basket? $14.7 \times 1.7 \times 0.8$ cm
63. Fragm. of wooden slip with six small ink spots on one side, a little curved lengthwise. $12 \times 1.5 \times 0.5$ cm
64. Two wooden slips of the "stationery" kind bound together with a string, with a wedge-sectioned slip between; partly smeared with clay-wash. L. 11.5—11, Br. 1 cm
- 65-76. Twelve frs. of wooden slips, seven of which are cut off, the rest burned off. No. 72 probably section of wooden disc (diam. about 13 cm), used as bottom or cover of round container. L. 14.1—5, Br. 1.3—1 cm
77. Fragm. of barrel-shaped wooden drum, with some pieces of the skin preserved at one end. Partly charred. The outside has the natural surface of the trunk; the inside has been roughly hollowed with a tool (chisel?) which has had an oval cutting-edge nearly 3 cm broad. The thickness varies. The two skins have been attached with small square dowel-pins in two rows at each end. Height 27.5 cm, diam. originally about 32 cm at the ends, larger at middle, where also the wall is thinner than at the ends. Near one end there is probably a suspension-hole, in the shape of an upright, 5 cm high oval with a longitudinal partition at middle. Cf. the drum in Report, Fig. 7, which is larger and much better made. Pl. 9: 10
78. Copper coin, *Wu-shu*, well preserved. Diam. 25.5 mm. Pl. 4: 10
79. Wooden sheath for knife, made of two halves tapering towards the lower, straight end, tightly wound with black-painted straw. The longer edges straight; section of sheath nearly oval. At the top a small notch at the middle of each



Fig. 39. Iron knife with sheath of leather, A. 10: I; 80 (Pl. 6: 2). Scale 1/3.

- side. The inside lined with coarse, yellowish cloth. L. 13.8, Br. 2.4, Th. 1 cm. Pl. 6: 3
80. Iron knife of typical Han form with well-preserved sheath of yellow leather. The knife-blade is single-edged and of uniform breadth like the handle which ends in a slightly oval ring. The cutting-edge is 10.5 cm long, and still quite uncorroded by rust. L. 20.5, Br. 1.2 cm. The sheath has a longitudinal seam on one broad-side; near the lower end two scores are cut through for attaching a strap, and at the upper end one broad-side continues into a 2.3 cm long flap with four scores. L. with the flap 21.7 cm. Fig. 39, and Pl. 6: 2
81. Fragm. of black-lacquered bone, lamina from armoured coat; rectangular, with rounded corners and four symmetrically placed round holes, across which the plate has broken. Slightly vaulted lengthwise. L. 7.4, Th. 0.2 cm. Pl. 5: 2
- 82-85. Four leather straps of about identical shape, red-lacquered, with oval ends. All except no. 83 have a seam of long stitches along the rim. L. 12.5—7.8, Br. 2.7—2.6 cm. Fig. 38: 3
86. Lamina from armoured coat, consisting of a trapezoid iron plate, with two corners rounded, and one pair of small holes near each edge. Nearly identical with the rolled-up A. 6: 8. $4.2 \times 4 \times 0.075$ cm. Fig. 10: 4, and Pl. 5: 3
87. Fragm. of iron band, bent together. Br. 1.3 cm
88. About half an egg, probably hen's egg (?)
89. Bunch of rush, tied together with strings
90. Jug-shaped water-sack of leather, later cut in pieces, some of which are missing. Originally made of one large piece, which was folded and sewn together with strings of veget. fibres along a seam, which between the two edges

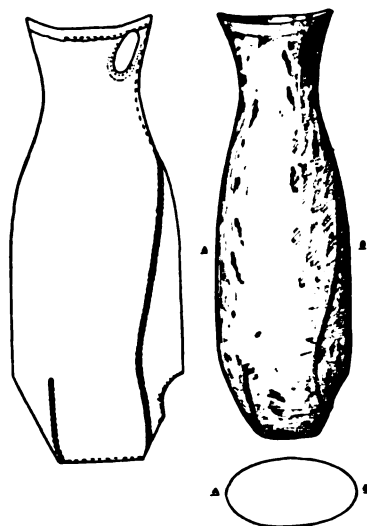


Fig. 40. Jug-shaped water-sack of leather, A. 10: I; 90, reconstructed from several pieces into which it was cut in olden times. Left = flattened out, right = probable original form. Scale 1/8.

has a band of leather to consolidate it. The rim of mouth is strengthened by being folded and sewn. Beneath this rim there is a larger oval hole at one side forming a handle, the edges of which are sewn. Near the bottom a rounded notch is cut, with small stitch-holes along the edge; this notch has probably held a leather strap for suspension of the bag. H. 46, diam. c. 10, diam. of the mouth c. 7 cm. Fig. 40

91. Sample of millet
92. White horsehair or coarse wool
93. Two frs. of figured silk in compound warp rep in blue, green, and grey-white, one sewn on the other. Execution is technically and artistically very high, according to Sylwan, its type of pattern being extraordinary and comparable with the Eurasian Animal Style (See Sylwan 1949, pp. 28 and 115—19, Fig. 59, Pls. 15 and 16)
94. 1-28. Frs. of partly sewn silk in various shades and qualities, in brown, yellow, red, green, blue-green and blue; interlining of veget. cloth and silk padding. No. 1 is a fragment of figured silk in compound warp rep: ground in moss-yellow, a simple diagonal lozenge pattern with bands over the intersections in greenish blue and light green; sewn on to a piece of plain silk of a green-grey shade (Sylwan 1949, pp. 28 and 123—25, Pl. 18 A)
95. Small piece from corner of sheet of coarse whitish paper. Size about 6 x 6 cm

96. Fragm. of a sleeve of dark brown silk, with silk padding and lining of light brown natural silk; strings (See Sylwan 1949, p. 28)
97. Raincloak, almost complete, complicatedly made of clusters of blades and stalks of grass which to a great extent are twisted into strings (a full description of the technique must be left for the future). Manufactured from top to lower end. The neck part, plaited of stout "cords", is attached to a rope for tying round the neck, and continues into the body part which is formed by "strings" placed vertically side by side and held together by horizontal strings at every 5th or 6th cm. The unravelled ends of each set of vertical strings hang loose at every second "seam", covering the part below. Full length about 73 cm. Pl. 17: 4

P. 281:

- 1-2. Nearly complete cross-bow arrow with bronze head remaining. The shaft of reed is lacquered 2.2 cm at fore-end and at base-end is furnished with three long feathers (L. 9 cm) attached through winding of fine band, lacquered black. Has prob. had two "string-holders". L. 32.3, diam. 1 cm. The point is of the common Han type with straight base-corners, and with a triangular score on one side. The actual tip is a little damaged; from the base-end extends an 8 cm long iron tang with round section and narrowing a little towards the end which is intact. L. of head 29, W. of sides 9 mm. Pl. 9: 2
3. Arrow-shaft of reed, the back-end probably incomplete (?). Wound with sinews round the back part, which also shows traces of having had long feathers attached by winding. L. (44), diam. 0.8 cm
4. Back part of arrow-shaft of reed; black-lacquered winding. L. (18), diam. 1 cm
5. Half of fore part of arrow-shaft of reed; black-lacquered 5 cm. L. (29), diam. 0.7 cm
6. Wooden peg with semi-circular section, one end charred. Tamarisk wood. L. 40.7, diam. 1 cm
- 7-10. Four bamboo sticks, all fragmentary. L. 51, 58, 56.7 and 30, Br. 0.8—0.7 cm
11. Piece of reed, possibly fragm. of arrow-shaft. L. 14.8 cm

Finds from the lower stratum

A. 10: II;

1. Wooden seal-tablet, intermediate type A 2—A 3, roughly made with lower end tapering from one edge to about half width at end. 12.5 x 2 x 1.2 cm. Pl. 14: 21
2. Unfinished wooden comb of the ordinary Han type with fine teeth; cut off lengthwise. Similar to A. 35: 4; 2. Th. 1 cm

3. Bamboo tube-container, L. 14.3, diam. 1.3 cm
4. Ditto of thick bamboo stem, wound with strings at the middle and originally also at the upper end, together with a piece of red- and black-lacquered skin used to stop up a break at one side. On the inside some dried-up liquid. H. 9.2, diam. 4.3 cm. Pl. 6: 14
5. Fragm. of open wooden cylinder made of natural hollow trunk, the bark remaining on the outside. H. 7.2, outer diam. 5 cm
6. Wooden object, poss. clothes-hanger, square peg with one end planed off to a handle, the other end roughly pointed and worn. 16.3×1.7 cm. Fig. 19: 7
7. Thin, slightly vaulted and nearly rectangular wooden tablet, prob. lamina from armoured coat, with several small holes, in some of which there are fine strings of veget. fibres. Broken off at two edges. The front and parts of the back have been painted black. Near to the intact end, which is obliquely cut with rounded corners, there is a worn furrow at both sides with traces of iron rust. Unique. $12.5 \times 4.5 \times 0.3$ cm. Fig. 18: 1
8. Small rectangular wooden tablet which a square tenon projecting from each shorter edge; roughly cut and probably unfinished. $5 \times 3.8 \times 0.6$ cm
9. Broken-off piece of wooden peg with three sides flat and the fourth vaulted. Near the intact, upper end there are 5 small rectangular holes (2×2 mm), made with a pricker, meeting at the centre. The broken-off end has formed a round tenon, diam. 1 cm. $4.5 \times 1.7 \times 1.5$ cm. Fig. 5: 3
- 10-13. Three small cut-off pieces of wooden pegs, and a handle of a spatula. The latter, no. 13, is narrow and widens a little towards the missing blade; L. 13, Br. 0.7—1.2 cm
14. Wooden peg, somewhat thicker at one end, where it is worn (by a string ?) at the middle. $13.2 \times 1.3 \times 0.6$ cm
15. Fragm. of burnt wooden stick
16. Fragm. of rectangular wooden piece
17. Fragm. of large, oval wooden trough, the ends of which are higher and thicker than the rims of the longer sides; repaired at the ends with strings knotted through holes. Painted brown on both sides. The largest bowl in the collections. L. 25, original W. 13.6, H. at the middle 4.7, at ends 7.8 cm. Fig. 41
18. Half of an oval wooden bowl of the common type with lug handles, the largest of its kind in the collections. Painted black on all sides. The handle has three small notches on the

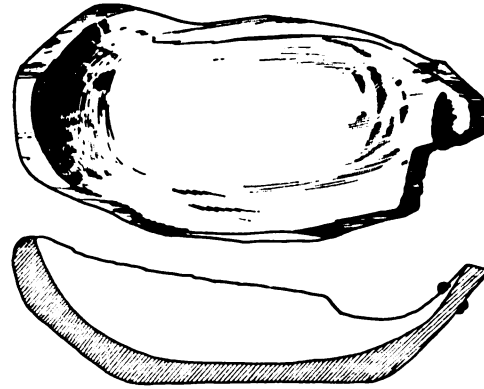


Fig. 41. Fragmentary wooden trough, A. 10: II; 17. Painted brown on both sides. Scale $1/4$.

- upper surface and an (unintentional ?) incised semi-circular score on the outside.
L. 19, H. 5.2 cm
19. Fragm. of wooden trough or bowl with upright (?) side, painted black on both sides. The rim is preserved, and one cm below it there is a small round hole. L. 18 cm
 20. Wooden implement for planing (wood ?), which has probably had an iron celt fitted on to the wedge-shaped fore-end. The back-end is well formed into a handle, the underside of which is flat and projecting sideways, seemingly to rest against the piece to be worked. The edges are chamfered. Made of hard wood. Unique. L. 31.5, size of wedge-shaped end $6.2 \times 4.7 \times 2.4$ cm. Fig. 42
 21. Long straight wooden handle of axe; the lower part with round section and remaining bark, the middle part octagonal and thin, the upper part with rectangular section and a longitudinal hole, which is narrow, rectangular and broader at one narrow-side. In the hole a piece of coarse, prob. veget. cloth, serving as packing for the metal axe-blade. Rather well made, worn. Unique. L. 45.5, diam of lower part 3, size of upper part 3.3×2 , H. of hole 6.5 to 3.8 cm. Pl. 11: 13
 22. Round wooden peg, pointed at one end. L. 22, diam. 1.7 cm
 - 23-25. Three wooden pegs, roughly cut. L. 36.8 and 31.5 cm
 26. Rectangular piece of skin, prob. untanned, some hair remaining. Two pairs of small scores near the middle part, for attaching straps. 29×5 cm
 27. Large iron knife of the common Han type with oval handle-ring, well preserved. The cutting part is a little broader than the handle and biconcave between the cutting-edge and the

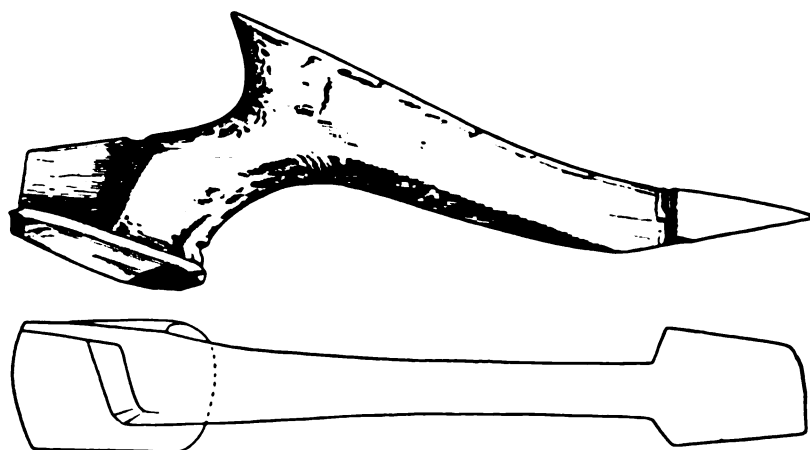


Fig. 42. Wooden implement, A. 10: II; 20. It has probably had an iron celt fitted on to the thinner end, for planing. Scale 1/3.

- back. The ring is square-sectioned with rounded edges. Total L. 29, L. of cutting-edge 18.5, Br. of blade at handle 1.5, at blade 1.7—1.3 cm (excluding the point). Th. at back edge mainly 4.5 mm. Fig. 43, and Pl. 6: 1
28. Fragm. of iron lamina from armoured coat. Thin plate, one end nearly square with three pairs of small holes along the edges, the other end narrowing owing to a concave cut in one edge and broken off (at the middle of a symmetrically formed specimen?). 7.5 × 3.8 cm. Fig. 10: 3, and Pl. 5: 1

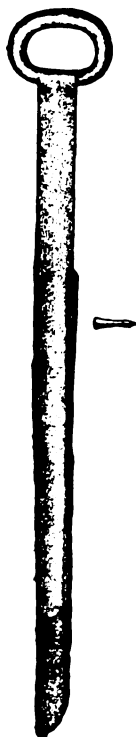


Fig. 43. Large iron knife, A. 10: II; 27 (Pl. 6: 1). Scale 1/3.

- 29-30. Two pieces of one (?) iron band, strongly corroded. L. 17.3 and 11.8, Br. 1.3 cm
31. Clapper-shaped object of bound-up grass, closely wound with fine string. Poss. implement for polishing. L. 4.2, diam. c. 3 cm. Pl. 17: 6
32. Sawn-off point of antelope horn, with a hole drilled through the base. L. c. 7.5, diam. 1.7 cm
33. 1-5. Frs. of silk, partly from garments, in various shades of grey, brown, and red. No. 1 is a long piece of brownish grey silk tied in a bow; no. 5, a piece of deep brick-red silk to which is attached a big loop with a button of silk wadding (See Sylwan, 1949, p. 28, Pl. 5 C)
34. Hood of rose silk in two shades, lined with brownish natural silk. It has belonged to an adult and is one of the two intact objects of silk in the A collection (the other being the needle-book A. 10: 24). A piece of taffeta, joined in the middle, covers the whole crown and both sides of the head down to the neck; to its lower edge is sewn an 8 cm broad piece of rep running round lower part of neck, thus the back of the head is intentionally left uncovered. The ends of the horizontal piece almost meet in the front where they have been tied together by cords of silk fabric (Sylwan 1949, pp. 28 and 84—5, Fig. 49)
35. String sandal, unusually large, with a piece of coarse leather fastened under the front part of the lenticular sole. On the edges at the toe-part and on the heel there are cords for fastening the sole to the foot. Nearly complete. L. c. 31, Br. 12—6 cm. Pl. 18: 1
36. Woven string shoe, the uppers sewn to stout sole plaited of strings. A burnt hole in the front part, otherwise complete. L. 25, Br. 9.5—8 cm. Pl. 18: 4

37. Shrivelled water-sack of leather, complete. The mouth is lined with skin and near to this is attached a leather strap for carrying. Six small leak-holes are wound with strings, held tight by small wooden pegs, and a larger leak or weak point has been repaired by being pressed together between two tightly bound pegs.
L. c. 57, W. of shrivelled sack 13 cm

P. 256:

1. Wooden handle for knife (?), round section. Made of a branch, the upper end of which is rounded; at the lower or fore-end a deep groove bound with a string. Pointed triangular hole for the tang. L. 10.5, diam. 3.3 cm
4. Wooden "face-peg", black- and red-painted face, triangular-sectioned upper part, hexagonal lower part, which narrows but is not pointed. L. 23.5, Br. 2.8 cm. Fig. 21: 6
5. Wooden object similar to A. 10: II; 6, but better made; clothes-peg ? The thicker and

carved part is painted black and polished by use. L. 20.7, Br. 1.6, Th. 2—1 cm

6. Wooden spatula with broad handle, the corners of the blade straight. L. 23.1, Br. 3.7—2.1, Th. 0.4 cm
7. Wooden spatula, the blade egg-shaped in outline and at an angle of 135° with the handle, which is oval in section and broken off. Rather well made of hard wood. L. (15.5), Br. 4.4 cm
8. Back part of arrow-shaft of reed, wound with threads and lacquered black. L. (16.3) cm
9. Nearly complete wooden comb with fine teeth, of the common Han type. 7.1 × 4.7 × 0.7 cm
13. Flat bamboo stick, bluntly pointed at one end, rather roughly made. Stylus ? 18.7 × 0.7 × 0.4 cm

P. 488:

13. Frs. of silk in red (similar to A. 10: I; 90 and A. 10: II; 33) and yellow shades

Ruin K 681 consists of a small mound near the dune-border between A 10 and the next tower on top of a little hill. Hörner, who in January 1933 picked up the following find from the mound, gives no more information about the find-place.

- K. 13681. Small triangular bronze arrow-head of the common Han type; the sides are narrow, the corners at the base irregularly shaped (probably ground), and there are traces of a tang of bronze. Desert patina. L. 26, W. of sides 6 mm

Watch-tower A 11

The third ruin eastwards in the Wayen-torei Line consists of a low tower on the top of a small, rounded hill called Jinst or Jinstei by the Mongols. The tower measures 4.75 × 4.40 m and is about 3 m high. It is built of a shell of stone around a core of alternating layers of stamped clay and boughs and tree-trunks; we do not know for certain, but might reasonably assume that these trunks were parts of an embedded frame of vertical and horizontal parts, as is the case in many Han towers elsewhere.

Around the ruin, on the top of the hill, were collected the following few surface finds. They seem to have no connection whatever with the Han material.

A. 11:

- 1-9. Nine small frs. of one or more earthenware vessels, plain and simply made. Two of the pieces from a rim, which has been slightly everted. Brick-red, homogeneous paste, much tempered with large sand grains. Th. 5-9 mm
10. Fragg. of iron ring with one thick projection on the outside; some kind of fitting. Desert patina. L. (4.2), H. 2.1, Th. 0.7 to 0.1 cm.

(Cf. the similar fragm. Pl. 38: 4 from Khara-khoto)

11. Small piece of iron
- 12-18. Seven small chips of chalcedony, very similar to the finds on the top of the high peak near Ukh-tokhoi in the Alakshan desert. Most of the chips are too small to have been used for making fire

Surface finds K 682 were collected by Hörner on March 12, 1933, at a place about 1.5 km ESE of tower A 11.

K. 13682: 1-3. Three iron frs. of probably one largish object of varying thickness, weathered and with blackish desert patina. Nos. 1 and 3 have one concave edge, possibly from large round hole through the original (flat ?) object

Surface find K 683 was picked up by Hörner on March 13, 1933, from a spot which could not have been far from the preceding one, both being situated close to the Wayen-torei Line of ruins.

K. 13683. Kidney-shaped iron fire-steel, the ends of the square-sectioned bar uncoiled. Unique.
L. 5.9, Th. 0.30—0.45 cm. Pl. 37: 4

Structure 28 consists of a cairn of stones which may have been a very small watch-tower. It is situated on the *sai* surface near the north shore of the glacial lake. The height is about 2 m, the circumference approximately 4 m (excluding debris). It is rather flat on its top, and has stones stacked up on the east side. Bergman also thought of other interpretations of this structure, and, as no finds were made, we are left in uncertainty as to its true nature.

Watch-tower 29 is the easternmost ruin or find-place in the Wayen-torei Line hitherto found. It was discovered by Hörner when examining the shore-lines of the glacial lake. The badly decayed tower was built of the same kind of sandstone as the mesa sediment upon which the ruin stands. Some fragments of charred beams were observed here (from quarters adjoining the tower ?), but he had no opportunity then of exploring the locality more thoroughly. The ground round the tower and mesa is covered with quantities of drift-sand, which conceals the ancient shore-lines.

Surface finds K 684 were collected by Bergman between dunes about 500 m south of the watch-station A 10.

K. 13684:

- | | |
|--|---|
| 1. Small fragm. of earthenware vessel with crossing cord-impressions on the outer surface. Dark grey paste | 2-3. Two plain frs. of earthenware vessel. Grey paste |
| | 4-8. Five plain frs. of earthenware vessels. Brick-red, sand-tempered paste |

Surface finds K 685 were collected between dunes immediately south of the previous place.

K. 13685:

- | | |
|---|--|
| 1-2. Two frs. of earthenware vessel with crossing cord-impressions on the outer surface. Grey paste | 3. Fragm. from rim of fairly large earthenware vessel with strongly everted rim. Dark grey paste |
| | 4. Ditto of smaller vessel with everted rim. Dark grey paste |

Surface finds K 686 were found between dunes 1 or 2 km SE of A 10.

K. 13686: 1. Copper coin, *Wu-shu*. Diam. 25 mm 2. Piece of slag

THE AT-TSONCH LINE OF RUINS

More than 6 km southwest of the watch-station A 10 there is a small ruined fortress, which starts a short, straight line of ruins running in the direction of the northernmost fort of the Etsina Oasis. It seems likely that this line of ruins was connected with the Wayen-torei Line. If there was ever a Limes rampart no traces were, however, discovered by Bergman in this area of sand-dunes, which in places cover clay soil often eroded to small *yardangs*. Reeds grow between the dunes.

Of the four localities that form this line, the watch-tower *A 13* was visited twice by Bergman, the second time during the final period at the Wayen-torei camp in 1931. The middle tower, *A 12*, and the ruined Fort *30* were examined on this later occasion, too, whilst the southernmost locality, Tati *K 687*, was excavated in connection with the other remains in the Etsina Oasis. There were, seemingly, no indications showing whether the latter are the totally decayed remains of a watch-station house or a tower.

Fort 30 faces squarely in all directions, the sides measuring about 36 m in length, 2 m in thickness and about as much in height. The walls, covered by sand except at the SW corner at the time of exploration, are built of stamped clay, reinforced with wooden beams placed across them. The interior is totally covered by drift-sand. No finds were made.

From here watch-tower *A 11* can be seen N 60° E.

Watch-tower A 12

About 2 km southwest of the above ruin there is an unusually well preserved watch-tower in the middle of high sand-dunes. The base measures 5 m square, and the height is 5 or 7 m depending on the nature of the postament, which may be a 2 m high *yardang*. The bricks were "unusually large", according to Bergman, which may or may not indicate that they belong to the (post-Han ?) "block" variety met with in many house ruins in the Etsina Oasis, and in a few strongholds of unknown age. Only headers are visible and there are no traces of those straw or reed layers which constitute a rather well established criterion of Han age for towers (e.g. by Stein — see *Serindia*, p. 754). As a matter of fact Bergman was not sure that the building dates from Han times, though he marked the finds from here with the letter A, which should indicate that they derive from this period. As the artefacts are not stated to have been found by excavation, they may merely have been picked up from the surface at the base of the tower; this circumstance also contributes to our suggestion that this tower was built at a place where a Han building had previously stood, and, perhaps, still stands as the core.

A. 12:

1. Piece of flat iron object, the thickness varying between 3 and 1 mm. Size about 8.5 × 4.5 cm
2. Half a spindle-whorl, probably consisting of a rounded potsherd. Blue-grey paste. Diam. 6.3, Th. 1.3 cm
3. Fragm. of stoneware vessel with impressed horizontal fields of lozenges. A-paste; Mohs 7.0
- 4-5. Two small frs. of earthenware vessel, cord-marked. Dark grey, homogeneous paste, a little sand-tempered and of hardness Mohs 6.5
6. Small fragm. of earthenware vessel, cord-marked. A-paste with "sand-patina" on both sides
7. Fragm. of earthenware vessel with faint straw-impressions similar to A. 10:9, Pl. 3:8. A-paste
8. Small fragm. of earthenware vessel, wind-eroded, with thin, brown slip (?) on both sides, and close rows of dark, glossy round dots on the inside (cf. Pl. 2:4). A-paste
9. Small fr. from rim of earthenware pot with flattened everted lip and wavy outside. Dark greyish brown paste, a little tempered with sand, well levigated, hardness Mohs 6.5. Surfaces glossy (from wear, or coating ?). Fig. 4:6

Watch-tower A 13

This brick tower is the only ruin in the row that was known to have a native name: At-tsonch, sometimes also Obot-ellis-tsonch. The bricks, the size of which are not mentioned by Bergman, were arranged in a very irregular manner except on the northern side, where there are only headers (compare the construction of the previous tower). In the upper part of this tower a layer of straw

is seen between every fourth course of bricks. No other particulars are given of the construction. It seems to be of Han type, the irregularities being due to later repairs.

The following finds were picked up in the immediate vicinity of the tower.

A. 13:

1. Half a spindle-whorl, made of a potsherd of irregular thickness. Grey paste.
Diam. 7, Th. c. 0.7 cm
2. Fragm. of earthenware vessel with upright rim and slightly marked shoulder part. Plain. A-paste.
Fig. 4: 3
3. Fragm. of earthenware vessel, cord-marked.
A-paste
4. Ditto, with similar but coarser impressions.
A-paste
5. Small fragm. of earthenware vessel, wind-eroded, with traces of cord-impressions. Dark grey, glossy surfaces. Grey, homogeneous, well levigated paste
6. Six very small bronze fragments, casting refuse except a piece of a cylindrical (?) object

Tati K 687 is situated 1 km SSW of the previous tower.

K. 13687:

1. Bronze ornament, possibly fragmentary at one end; flat, composed of a middle bar crossed by two parallel, reversed S-bars; the intact end of the middle bar, and the nearest end of a cross-bar, are both pierced through for rivets or threads, and the former end projects sideways into a "beak". Thick green verdigris. Unique.
L. 4.5, W. 2.6, Th. 0.4—0.3 cm. Pl. 32: 1
2. Bronze arrow-head with triangular section, of the common Han type. Each side has a small triangular depression, the edges extending into barbs. Traces of iron tang at base-end.
L. 42.5, W. of sides 1.2 cm
3. Ditto with straight corners between edges and base. The tip is a little blunt.
L. 27, W. of sides 9 mm
4. Eight small bronze frs., three of which belong to a sewing-ring like Pl. 35: 12; Br. 8 mm
- 5-6. Two earthenware net-sinkers of type B (with grooves and notches).
L. 4.5 and 4, Br. 1.2 and 1.4 cm
- 7-8. Two frs. of spool-shaped earthenware net-sinkers, type A. No. 7 is about 4.5 cm long, 2.5 cm in diam.
9. Spindle-whorl made of a light grey potsherd with crossing cord-impressions. Diam. 3.8, Th. 0.4 cm
10. Half a spindle-whorl, made of a light grey potsherd. Diam. 3.9 cm

THE KHARA-KHOTO REGION EAST OF THE IKHEN-GOL

Topographically speaking the immense Khara-khoto region can be divided into two distinct sub-areas, namely, the mesa area in the south, and the plains of Erego-khara-burukh and adjoining parts in the north.

In terms of ancient settlement, however, this division can be used only to a certain extent. While the southern area may be characterized as a defensive region with lines of watch-towers running in several directions and with practically no rural remains, the northern area once formed the major part of a rather densely populated agricultural district, the ancient oasis of Etsina (or Kü-yen). This settlement extended into the open patches and valleys in the northernmost part of the Mesa Area, including also the immediate surroundings of the town of Khara-khoto. Since "Erego-khara-burukh" seems to be a name or designation used by the Torguts chiefly for the continuous plains to the north and east of the town, we shall, henceforth, use the short term of "Khara-khoto Zone" when referring to the southern part of the Etsina Oasis.

THE ETSINA OASIS

Of the two parts of the Edsen-gol region that have furnished natural conditions for an extensive agriculture, the Etsina Oasis exceeded the combined Mao-mu and Shuang-ch'eng-tsi oases considerably, in size, and range of landscape types. The ruins of farmsteads, etc., amount to more than two hundred, and there are numerous other traces of ancient cultivation, as e.g. irrigation canals. These remains are mostly to be found in Erego-khara-burukh. Here they often lie on the top of *yardangs*, some of which are as much as 2 metres high; sometimes the original surface layer of black gravel still remains on these *yardangs*, but usually the gravel has been washed down into the eroded parts, which are in places difficult to distinguish from true river-beds. The soil is of light yellow clay, which sometimes builds up into round or cone-shaped mounds, often crowned with tamarisks. Together with the more recent sand-dunes (bare or reed-covered), and the *yardangs*, they complete the picture of a gently undulating landscape.

Bergman worked in this labyrinth during the last two months of 1930, before starting to excavate at Mu-durbeljin (A 8). It was not his original intention to explore this chaos of incalculable ruins mostly from periods later than the Han dynasty — the remains of the latter period being his principal research objects, and knowing from Chinese sources that the "town" (*ch'eng*) of the Han

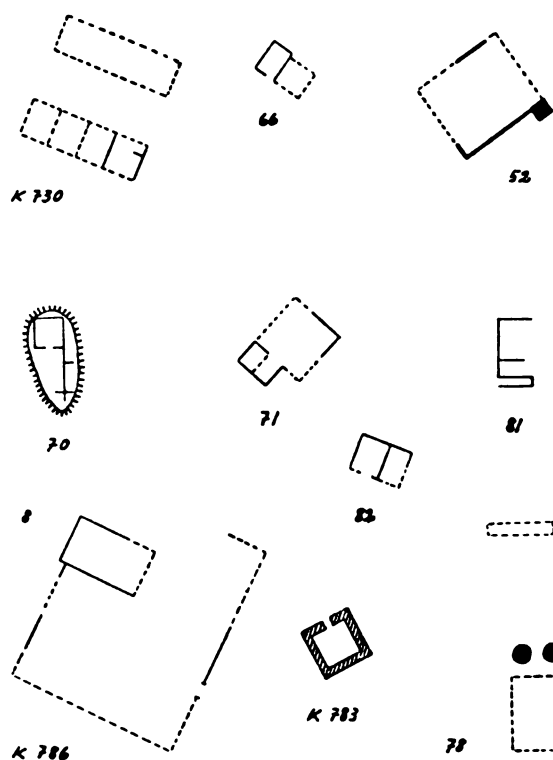


Fig. 44. Sketch-plan of ruined sites in the Etsina Oasis.
Orientation N—S. Scale 1: 1000.

district of Kü-yen was situated somewhere in these environments, he searched for a walled town of Han type.

But Bergman simply could not help examining almost every ruin he came across, detaching workers to excavate it, and entering it on his route maps. It says much, moreover, for Bergman's skill as field explorer that he succeeded in getting the routes to agree so well although he made use of simple devices such as stepping, compass, spy-glass, and land-surveyor's measure.

If, consequently, the geographical positions of the structural remains, and to a certain extent, their constructions were carefully surveyed, the collecting of finds was on the contrary in most cases carried out carelessly. Bergman was content with reconnaissance collections of artefacts from the later periods, which was quite natural in view of his limited material resources and want of time. In general, the following groups of finds marked with a K were collected from the surface, or very superficially, from the inside of the ruins as well as from their immediate neighbourhood.

Owing to the multitude of ruins and their irregular distribution it is hardly possible to describe them in any satisfactory methodical sequence. Map III shows how Bergman chose to number the localities and objects beginning in the north and proceeding by horizontal zones with the highest numbers in the east, and ending in the southeastern corner of the Khara-khoto Zone.

Walled Enclosure K 688

Near the Challain-gol, a small dried-up arm of the Ontsein-gol, between the latter and a long, narrow, unusually high mound, stands a ruined stronghold, of which only the outer walls remain.

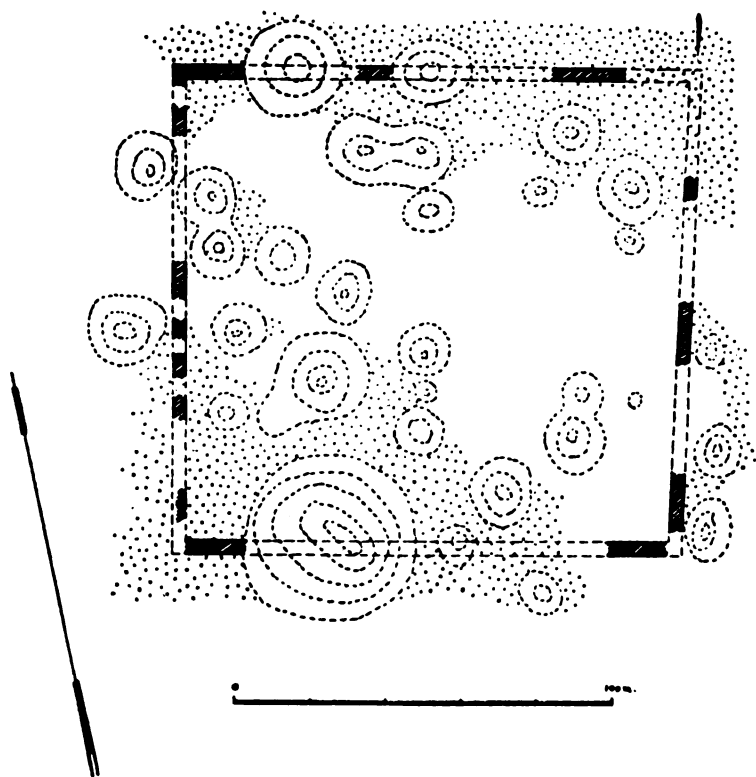


Fig. 45. Plan of Walled Enclosure K 688. Hatching = visible remains of wall of stamped clay, dotted contours = tamarisk cones, stippled = sand.

The ground-plan is an irregular square measuring 133—139 × 128 m, and the walls are of stamped clay, c. 3.5 m thick and in places 5 m high. No remains of houses could be discerned in the interior, and it was equally impossible to discover any gateway, owing to some extent to the high tamarisk-cones and drift-sand covering sections of the walls and the ground inside the walls. Plan is shown in Fig. 45.

The finds, which were excavated superficially in the sand, consist of pottery and a piece of slag. The 12 sherds probably derive from 10 different vessels classifiable as rough unglazed stoneware (1) and earthenware (9), their surface treatments or decorations being cord-impressions, "combed" festoons, a combed wavy band and an impressed border of small lozenges.

K. 13688:

1. Fragm. of earthenware vessel with impressed, horizontal border of small lozenges, arranged in fields about 5 cm long, which are separated by vertical lines. A-paste
- 2-3. Two small frs. of one hard earthenware vessel, cord-marked. Grey, well levigated paste, hardness Mohs 6.5
4. Fragm. of rather hard earthenware vessel with border left of faint oblique cord-impressions. Grey paste, hardness Mohs 5.5
5. Small fragm. of ditto with crossing cord-impressions, and decoration of a "combed" festoon around. Poorly burnt paste with light brown core changing into dark grey surfaces; hardness Mohs 5.5
6. Fragm. of earthenware vessel with faint crossing cord-impressions and annular scorings, and simple, coarsely incised festoon design applied to the former. A-paste, slightly worn by sand
7. Fragm. of small, bulging, rough earthenware vessel with decoration of festoons between

- horizontal bands, both executed with a multiple tool. Light brown, homogeneous, sand-tempered paste with grey surfaces; hardness Mohs 6.5
8. Fragm. of fairly large earthenware vessel with carelessly incised simple wavy lines. Light grey paste
 9. Piece from rim of rather hard earthenware bowl or dish, plain. Light grey paste
 10. Piece from rim of very small earthenware bowl, probably of the "lamp" type shown in Pl. 20: 5. Grey paste
 11. Piece from rim of strongly bulging, rough, unglazed stoneware pot with wavy outside. Coarsely made. Grey paste, hardness Mohs 7
 12. Piece from rim of bulging, rough, unglazed earthenware pot. Grey paste, hardness Mohs 5.5
 13. Piece of slag

House K 689. The finds were collected by Bergman.

K. 13689:

1. Small piece from foliate rim of porcelain cup stand or dish, cavetto showing short vertical ridge; underglaze blue decoration consisting of classic scroll on the horizontal lip.
Cf. no. 2 below
2. Piece from lower part of possibly the same stand or dish as no. 1 above. Three parallel wavy lines in underglaze blue around cavetto. Under-side unglazed and fired light orange.
H. prob. c. 2.5 cm
3. Piece from rim with slightly everted lip of small porcelain bowl, blue decoration. Outside, bordering double line above petal tips of prob. lotus blossom. Inside, line around rim, below which are chrysanthemum leaves
4. Small piece of porcelain vessel, celadon ware, plain
5. Small piece from rim of stoneware bowl, Kün ware, with pale green-blue glaze on buff body
6. Fragm. of large unglazed earthenware vessel with combed festoon design incised upon coarse cord-impressions. Light brown, homogeneous paste with dark grey surfaces; hardness Mohs 6.0
7. Spindle-whorl made of dark grey potsherd with incised parallel lines. Diam. 3.3 cm
8. Piece of white flint, one edge a little retouched

Watch-tower K 690 is built of bricks of unknown sizes. The base is 3 m square, and the height amounts to about 4 m. Bergman hesitated about the time of building, but finally ascribed it to the Khara-khoto period. The objects described below were probably collected on the ground at the base of the tower.

50 m away there is another ruin, which was not examined by Bergman, who, however, did not exclude the possibility that it is a largish watch-tower. Both ruins are situated near a small branch of the Challain-gol.

K. 13690:

1. Fragm. of large copper coin with a *chung* as third character of the legend
2. Small bronze fitting with curved edges and a hole for rivet pierced through near each end, one of which has broken away. 1.4 × 0.8 cm
3. Various bronze pieces, mainly refuse from casting

House K 691 is made of "block" bricks, and situated on a 1.5 m high *yardang*. The best preserved room measures 4.5 × 8 m.

K. 13691:

1. *Wu-shu* coin. Diam. 26 mm
2. Bronze arrow-head of the triangular Han type, with a rather short base. Tang-hole is about 5 mm deep. L. 27, W. of sides 11 mm
3. Ditto, with very short base (L. 3 mm), the point broken away.
L. was prob. c. 27, W. of sides 11 mm
4. Bronze ring made of bent-up wire or pin
5. Various small bronze pieces, mainly refuse from casting, but also two small frs. of coins, one with a *-shu*

House K 692

K. 13692:

1. Half of a pear-shaped spindle-whorl, stoneware with vertically grooved surface, which is glazed in a dark greyish colour. The same glaze occurs in upper half of the hole, which widens a little towards the ends.
Diam. 3, H. 2.3 cm. Fig. 5:8, and Pl. 23:13

- 2-3. Two frs. of spindle-whorls made of light grey potsherds. Diam. c. 4 cm
- 4-6. Three round potsherds with different crossing cord-impressions, dark grey and red ware. No. 5 has unfinished central hole.
Diam. 3—8—5.5 cm
7. A few small pieces of bronze and slag

House K 693 is situated in a difficult *burukh* region with drift-sand. The collection from here derives apparently from different periods, which may be explained by the fact that the two collectors Wang and Chin contributed on different days, and before Bergman made his mapping tour to this place. There is thus the possibility that some of the artefacts belonged to another ruin.

K. 13693:

1. Fragmentary *Wu-shu* coin without rim
2. Copper coin, strongly corroded and broken into pieces. There are left of the legend a *Ta* or *T'ien* as the first, and a *yüan* as the third character
3. Small fragm. of copper coin with a *T'ien* as the first character
4. Nearly cylindrical miniature bell of bronze.
L. 2.4, diam. 1 cm. Pl. 33:10
5. Bronze arrow-head of the triangular Han type, strongly corroded, the point blunt and the corners at the base straightly rounded.
L. 34, W. of sides 11 mm
6. Ditto with straight base corners directed upwards, the base widening towards its under-side. Traces of bronze tang.
L. 29, W. of sides 12 mm
7. Ditto with broken-off point, variously shaped corners, and a few irregular holes made when casting. L. 27, W. of sides 10 mm
8. Fragm. of small bronze rod, forked at one end, probably refuse from casting. L. 3.5 cm

- 9-11. Three thin bronze wires, possibly from hair-pins. L. 7—5, diam. 0.2 cm
12. Spool-shaped bead of light yellowish brown chalcedony or agate.
L. 22, diam. 11 mm. Pl. 30:26
13. Hexagonal, spool-shaped bead of amethyst-coloured glass, with one end broken off.
Diam. 10 mm. Pl. 30:22
14. Small ring-shaped bead of green glass.
Diam. 6 mm
15. Small spiral bead of green glass. Diam. 4 mm
- 16-17. Two rounded potsherds of grey ware
18. Round potsherd of brown-glazed, thick stoneware. Buff body. Th. 1—1.1 cm
19. Small piece of porcelain vase, poss. from shoulder, underglaze blue decoration. Outside, portion of large leaf. Interior unglazed.
Th. 0.45 cm
20. Larger ditto, blue decoration. Outside, portion of floral spray. On interior surface run-down glaze

House K 694 is of burnt bricks, and is one of the northernmost in the region of Erego-kharaburukh.

K. 13694:

1. Bronze arrow-head of the triangular Han type, with short base and rounded straight corners. Traces of bronze tang.
L. 28, W. of sides 10 mm

2. Various small bronze pieces
3. Spindle-whorl of light grey potsherd
4. Round potsherd of grey ware with crossing cord-impressions. Diam. 3.5 cm

House K 695 is built of bricks of unknown type, and is much decayed. The collection was assembled on two different occasions by Wang and Bergman respectively.



Fig. 46. Bronze mounting in the shape of an ogre mask, K. 13695: 3 (Pl. 32: 8). Thick verdigris. Nat. size.

K. 13695:

1. Two pieces of copper coin, certainly a post-Han type
2. Small fragm. of coin with narrow, high rim
3. Bronze mounting in the shape of a *l'ao-l'ie* mask with curved "elephant trunk" probably for holding ring-handle of vessel. Strongly corroded, the features thus indistinct. W. 3.5 cm, Th. much varying. Fig. 46, and Pl. 32: 8
4. Bronze arrow-head of the triangular Han type, with the point broken off, and the corners straight at the base. On one side a large lump of verdigris which is probably the remains of a bronze tang. L. 29, W. of sides 10 mm

House K 696

K. 13696:

1. Spherical bead of cornelian or agate. Diam. 10 mm
2. Half of a spool-shaped bead of grained blue and white glass. L. 16 mm
3. Spindle-whorl of grey potsherd, the edges worn. Diam. 4 cm
4. Two small pieces of bronze, one of which is probably from wire of ear-pendant

Tati P 2 is situated somewhere between houses K 696 and P 3; it was not mapped by Bergman, the collection being brought from here by Wang.

P. 295:

1. Bronze arrow-head of the triangular Han type, unusually narrow, with hardly distinguishable corners. The point broken off.
2. Ditto of more common variety, with straight corners. L. 27, W. of sides 10 mm
3. Fragn. of copper coin

House P 3 is of very small size. The small collection from here comprises objects from two periods and was assembled by Wang. There are various indications of hesitation on the part of Bergman in connecting the following finds with this particular ruin. The blending may be due to the fact that there is one *tati* west and another SSE of the house.

P. 342:

1. Piece from fairly large porcelain vessel, the enamel decoration of which resembles the Ming *san-ts'ai* type. Light blue dragon design on a yellow enamelled ground
2. Melted piece of blue-green glass
3. Very small bead of glass-flux (?), dark blue-green
4. Bronze lump, attached by verdigris to a coin of unknown type
- 5-15. One fragm. of a *Wu-shu* coin and fourteen various small bronze pieces

5. Small piece from rim for bronze mirror, rather thin with rim a little thicker, four concentric levels being the only preserved characteristics of this mirror. Th. 2.5—3 mm
6. Various bronze pieces, partly refuse from casting
7. Nearly half of a wide stoneware bowl, Kün ware, the glaze changing from light blue-green to purple, the body being buff in colour. Diam. has been 19.6, H. 8.7 cm. Fig. 64: 1
8. Piece of glazed stoneware, probably of the same bowl as no. 7
9. Nineteen pieces of stoneware bowl, celadon ware, of which 15 sherds match each other; traces of repairing with clamps. At bottom of inside a simple incised flower design. Body is greyish white. Diam. of mouth has been c. 19.5, H. 8 cm. Fig. 63: 1
10. Piece from rim of bowl similar to no. 9, once repaired with clamps
11. Rounded potsherd of dark blue-grey ware with crossing cord-impressions
12. Half of spindle-whorl made of a reddish light grey potsherd
13. Treble bead of blue-green glass. L. 16, diam. 7 mm. Pl. 30: 15
14. Fragn. of small light blue glass bead

House K 697 is built of bricks, some of which are burnt. Around the house were seen no less than 18 stone rollers for crushing grain. The collection has probably been assembled, by Chin, from other places as well as the house, partly because of its "blended" nature, partly because of its size (52 items). The following lines, taken from Bergman's Diary, and referring to an area with this ruin and several others up to and including Fort 31, may give a fair reason for a few cases of confused collections: "Went together with Chin to the house ruins found by him yesterday north and northwest of the camp, and situated amongst high, thick tamarisk cones and dunes. All (houses) are so insignificant and decayed that one could well pass them without seeing them, were it not for the fact that the ground around the ruins was totally covered with potsherds and pieces of porcelain. Quern-stones and threshing-stones are also good clues."

K. 13697:

1. Fragn. of *Wu-shu* coin with unusually high rim
2. Small fragn. of copper coin with a *-pao* as the fourth character
3. Small thin piece of bronze with hole near one end. 1.7×0.6 cm
4. Piece of bent bronze pin
5. Thin bronze wire bent into a hook
6. Very small bronze ring. Diam. 6 mm
7. Half of a spherical bead of white, untransparent glass. Diam. 7 mm
8. Four small pieces of glass, prob. from beads, two of which are blue and two green
9. Piece of bronze sheet with several holes made with a nail
10. A few bronze pieces, mostly refuse from casting
11. Several frs. of fairly small stoneware bowl, Ying-ts'ing ware, with pale green-blue glaze; eleven pieces match each other. Rim is a little foliate and near it there are floral designs in very low relief on the inside, which is also decorated with slight radial grooves. Pl. 26: 5
12. Six frs. of stoneware bowl of the same kind as no. 11, all now glued together. Traces of repairing with clamps. Diam. of mouth has been 12.6, H. 6.3 cm. Fig. 63: 3
13. Piece from rim of stoneware bowl of same kind as the two above, the relief pattern on the inside being, however, of a little different type: only one flower besides the radial grooves. Repaired in olden times with clamps
- 14-19. Six pieces of celadon stoneware, some of them with traces of very slight relief decoration
20. Piece from rim of small porcelain cup, Ting ware, yellowish white
21. Several pieces of stoneware bowl, Kün ware, all matching each other. Dull, pale green glaze on yellowish red body. Diam. of mouth has been 15.2, H. 6.4 cm. Fig. 64: 4
- 22-42. Twenty-one pieces of several Kün bowls of varying sizes and colours, the latter being pale light green, blue-green, blue-grey and dark blue. Some of the pieces are from rims
- 43-46. Four pieces of celadon ware, three of which are from the rim
47. Piece from rim of stoneware bowl with black glaze on grey body
48. Piece from rim of fairly large stoneware vessel with blackish brown glaze on yellow body
49. Small fragn. of stoneware bowl with transparent glaze covering under-glaze designs in light red and light green enamel on both sides. Buff body
50. Fragn. of stoneware ornamental piece with green enamel covering brick-red, rather porous body
51. Small, low earthenware bowl probably used as a lamp (type as on Pl. 20: 5). Light grey paste. Diam. of mouth 8.5, of base 4.5, H. 2.4 cm
52. Fragn. of spindle-whorl of stone, probably limestone. Green with intermediate layer in yellowish green

House K 698. The following finds, which are from different periods, were collected by Chin.

K. 13698:

- 1-4. Four small frs. of three or four copper coins, three of which have a *Wu-*, the fourth a *-shu*
5. Fragn. of copper coin, *Cheng-ho-t'ung(-pao)* (1111—1118). Diam. 30 mm
6. Copper coin, *Cheng-sung-yüan-pao* (1101 A.D.). Diam. 24 mm
7. Small fragn. of coin
8. Small bronze seal, flat and shaped like a hare in outline, the animal in a crouched, sitting position. Handle consisting of triangularly bent wire attached across the back of the seal. Unique. 2×1.8 cm. Pl. 32: 22

9. Small three-lobular bronze fitting with ornamental depressions on front. Two rivets on back, attached to centre of each lobe. Perhaps representing very stylized ogre mask. L. 17 mm. Pl. 32: 10
10. Fragm. of curved bronze rod, possibly part of ornament, the front being vaulted and divided into round segments, the back flat and with a rivet at one end. Unique. L. 4.5 cm. Pl. 32: 24
11. Fragm. of flat bronze ring. Br. 6 mm
12. Piece of bent bronze pin
13. Various bronze pieces: fragments: sheet, refuse from casting
14. Part of iron rod, flat lanceolate point. Of arrow-head ?
15. Fragm. of small yellowish white glass bead
16. Fragm. of blue-green glass bead, flat and rose-shaped. Diam. 11 mm
17. Piece of flint with coarse retouches
18. Bone stick with round section, narrowing towards one end. Spindle-stick or eating-stick ? L. 19, diam, 0.6—0.3 cm. Pl. 39: 6
19. Bottom of stoneware bowl, celadon ware; centred inside, indistinct low relief designs consisting of a small circle, from which short lines radiate. Diam. of stand 4.1 cm
20. Piece from rim of strongly bulging, rough unglazed earthenware vessel with decoration consisting of coarse "combed" wavy band between the profiled rim and a fillet with zig-zag band in relief. Blue-grey paste, homogeneous, hardness Mohs 6.5
- 21-22. Two small, low earthenware bowls of the "lamp" type. Light grey paste. Diam. of mouth 6.5 and 6.4, of bottom 3.7, H. 2.1 and 2.5 cm. Pl. 20: 5
23. Half of spindle-whorl made of a blue-grey potsherd. Diam. 4.3 cm

House K 699 is the northernmost house ruin of Erego-khara-burukh.

K. 13699:

1. Copper coin, *K'ai-yüan-t'ung-pao*. Diam. 25 mm
2. Half of illegible coin
3. Small piece of bronze, about 2 mm thick

House K 700 is situated near a small canal.

K. 13700:

1. Flattened lead ball with large rectangular hole between flattened ends. Diam. 2.5, H. 1.7 cm. Pl. 37: 11
2. Small bronze ring of bent-up pin. Diam. 17, Th. 2 mm
3. Rectangular piece of bronze sheet, the corners obliquely cut and with a hole at each end. 4.1 × 1.9 cm
4. Various bronze pieces, refuse from casting and the like
5. Spindle-whorl made of grey potsherd, strongly wind-ground
6. Several frs. of rather small stoneware bowl, "Feather-combed" ware (with marbling effect). Wall consists of two layers, the outer layer with the "feather-combed" decoration of geometrical designs covered with greenish, transparent glaze, the inner layer consisting of ground-paste only and covered with rather thick, dark brown glaze. Ground-paste buff, lamellas of decoration dark brown. Th. 0.9 cm. Pl. 23: 16
7. Piece from rim of stoneware bowl, celadon ware, with incised, simple leaf designs on the outside

Houses K 701 form a group of three small houses, all very much eroded, and situated on a 1 m high *yardang*.

K. 13701:

1. Copper coin, *Ch'ung-ning-chung-pao* (1102—1107). Diam. 33 mm
2. Copper coin, *K'ai-yüan-t'ung-pao*. Diam. 23 mm
3. Half of copper coin, the first character *Yüan*, the last *-pao*
4. Small fragm. of large copper coin, prob. of the same kind as no. 1
- 5-6. Two small corroded frs. of coins
7. Bronze finger-ring with rectangular front plate and free ends. Diam. 1.9 cm
8. Small oval bronze piece of sheet with nearly triangular hole, fitting for base of knife-blade or knife-sheath. 1.7 × 0.9 cm. Pl. 37: 6
9. Small bronze buckle with two holes opposite each other in the edge, and a broken-off rivet at centre of inside. No exact counterpart in the collections. Diam. 1.3, H. 0.7 cm

10. Various bronze pieces, fragments and refuse from casting
11. Rhomboid plate of blue-green glass with the edges chamfered on one side. Prob. setting stone of finger-ring. 12×12 mm
12. Small hexagonal plate of blue-green glass, the edges of one side chamfered. Prob. same use as no. 11. 11×7 mm. Pl. 30: 44
13. Part of small glass piece in the shape of a pin. Pl. 30: 28
14. Half of blue-green glass bead, flat and rose-shaped. Diam. 12 mm
15. Piece from rim of wide stoneware bowl with thin, light brown glaze on greyish, untransparent body
16. Fragm. of wide stoneware bowl with brown glaze on both sides. Greyish body
17. Small piece of green-glazed stoneware object. Grey body
18. Small spindle-whorl made of a grey potsherd. Diam. 2.5 cm

House K 702 is hardly visible amongst dunes, which are up to 5 m high. Chin collected the finds.

K. 13702:

1. *Wu-shu* coin. Diam. 25 mm
2. Copper coin, *Süan-ho-t'ung-pao* (1119—1126). Diam. 30 mm
3. Worn copper coin, possibly *Yüan-feng-t'ung-pao* (1078—1094). Diam. 24 mm
4. Copper coin, *Siang-fu-t'ung-pao* (1008—1017). Diam. 25 mm
5. Bronze hair-pin with top part consisting of six knobs, and the other end flat and pointed. (Cf. Pl. 35: 18.) L. c. 14.8 cm
6. U-shaped bronze hair-pin, consisting of a round wire thickest at the ends and the middle part. Now greatly deformed. L. c. 12 cm
7. Small conical bronze knob, poss. spindle-whorl, with nine vertical grooves and a large round hole through the centre. Diam. 12, Th. 10 mm
8. Ear-pendant (?) consisting of a thin bronze wire, at one end bent up to a ring, and at the straight lower part wound round with fine bronze thread, possibly for attaching a bead. L. 3.5 cm. Pl. 35: 6
9. Pointed end of a flat bronze pin
10. Fragm. of U-shaped bronze ornament, Poss. hair-pin, consisting of three parts: two tube-shaped shanks joined by a bent middle part, through which is drawn a thin bronze wire with pointed ends sticking into the shanks
- 11-12. Two small flat bronze rods
13. Piece from rim of probably round bronze disc, the rim being rather high and slanting towards the centre
14. Small, slightly vaulted bronze buckle with a rivet and rivet-plates through the centre. Diam. 13, H. 2 mm
15. Nearly spherical bead of yellowish white, untransparent glass. Diam. 7 mm
16. Oblong, spool-shaped bead of light blue glass, made of a spiral-twisted thread. L. 12 mm. Pl. 30: 40
- 17-18. Two small blackish blue glass beads. Diam. 8 and 6 mm
19. Half of nearly spherical bead of blue glass with a few deep grooves parallel to the centre hole. Diam. 9 mm
20. Fragm. of bead of grey glass-flux (?) with inlaid spots of blue-green glass. Flattened conical form. L. 14 mm. Pl. 30: 30
21. Fragm. of pointed, blue-green glass plate, untransparent. One side flat, the other side slightly vaulted. Broken off across a hole. 20×14 mm. Pl. 30: 51
22. Small, round piece of blue-green glass, one side flat and the other side vaulted. Probably bezel of finger-ring. Diam. 8 mm
23. Fragm. of small ornament of pale yellowish glass, carved into a leaf-like motif at one side, the other side flat. Size c. 16×15 mm. Pl. 30: 50
24. Various bronze pieces, including sheet, small fragments and refuse from casting
25. Lanceolate iron piece, possibly fragm. end of shank
26. Small iron piece with oval section and bronze verdigris. Fragm. from sword-hilt ? 3.7×1.7 cm
- 27-28. Two iron frs. with traces of bronze verdigris
29. Foot of stoneware bowl or stem-cup. Light yellow body with traces of thin transparent glaze. Diam. 4.8, H. 3 cm
30. Piece from profiled foot of a porcelain cup or bowl, Ting ware, now yellowish white. H. 1.5 cm
31. Two pieces from rim of wide bowl, Ts'i-chou ware. Body buff; thin transparent glaze covers inside, but ends above base on outside. Decoration of inside consisting of reddish brown under-glaze concentric lines on white slip, and on-glaze lead-silicate speckles in red and green shades, making up a stylized plant pattern
- 32-33. Two spindle-whorls made of reddish yellow potsherds. Diam. 5.5 and 3, Th. 1.4 and 0.9 cm

House and tati K 703. The collection made by Chin, is clearly stated to have been assembled partly from the house and partly from the tati between this house and the one previously mentioned. No wonder, therefore, that the finds are from different periods.

K. 13703:

1. Copper-coin, *Ta-ts'üan-wu-shi*, a little damaged. Diam. 24 mm
2. Fragm. of coin, possibly a *Wu-shu*
3. Bronze arrow-head of the triangular Han type, with straight edges and rounded straight corners. The base surface is oblique with a narrow, 2 mm deep tang-hole. L. 28, W. of sides 10 mm
4. Bronze mounting for belt, the fore-end bracket-shaped, with rectangular hole at back and rivet holes through two side-lobes. Well made, as compared with the only other mounting of this type in the collections, Pl. 34: 15. Pl. 34: 17
5. Fragm. of bronze handle of spoon (?). L. 7 cm; Th. 5 mm at the middle part, and 1—1.5 mm at the ends
6. Bronze sheet bent into a finger-ring (?)
7. Half of bronze finger-ring with one side widened
8. Round bronze rod, bent up to an open oval. Th. 3.5 mm
9. Fragm. of round, pressed sheet-bronze ornament, the pattern being a rosette. Diam. 18 mm
10. Rusty iron nail with rhomboid bronze plate at head
11. Fragm. of a ring of mixed iron and bronze
12. Fragm. of small melting-pot of same form as on Pl. 20: 1
13. Piece of white chalcedony
14. Half of a cowrie shell (*Cyprea moneta*) with dorsal part ground off. L. 25 mm

- 15-17. Three small cowrie shells. L. 17—14 mm
18. Double bead of white-yellow, non-translucent glass, broken at middle. L. 18, diam. 10 mm
- 19-21. Three small glass beads: blue ring, blue-green spiral wire, and green spool-shaped bead
22. Fragm. of spool-shaped bead of brown-yellow, striped glass
23. Five small pieces of blue-green glass
24. Various bronze pieces: sheet, fragments and refuse from casting
25. Stoneware bowl, Kün ware, complete except for a small piece of the rim that was found broken into several pieces. A few pairs of holes with rust show repairing in olden times with iron dogs. Light bluish glaze on both sides; on the outside, however, uneven and not reaching down to the ring-shaped stand. The outside bottom has the character *Ch'en* painted in black ink. The body is thick and light yellow. Diam. of mouth 18.4, of ring-foot 6.3, H. 7.9 cm. Fig. 64: 5, and Pl. 24: 6
- 26-27. Two pieces of Kün bowls with blue-green and bluish purple glazes respectively on light yellowish body
28. Piece from lower part of stoneware bowl, "Northern Celadon" ware. Pale green-brown glaze on light yellowish body, on the inside covering vigorous leaf-designs, carved in low relief. The ring-foot is very low. Pl. 23: 7
- 29-37. Eight complete and one half spindle-whorl made of potsherds, light grey except one which is red. Diam. 4.5—3 cm

House K 704 has a few accumulations of slag around it.

K. 13704:

1. Spool-shaped bead of dark green glass, roughly made. L. 15 mm
2. Small spherical bead of blue glass. Diam. 4 mm
3. Half of spherical bead of transparent, uncoloured glass. Diam. 11 mm
4. Small bronze pin bent into an oval, poss. used as an ear-ring
5. Oval plate of bronze from finger-ring, which has been about 15 mm in diam. Greater part of front is raised. No counterpart in the collections
6. Piece of sheet-bronze
7. Piece from rim of bronze vessel
8. 1-7. Frs. of silk and hair cloth
 1. Two frs. of natural taffeta. Cl. 36 × 26—20 and 38 × 26

2. Fragm. of greyish brown natural taffeta; the selvage more closely woven than the main weave. Cl. 48 × 27
3. Two frs. of greyish brown natural taffeta, sewn together at their selvages with natural s-tw. silk thread in back stitch. One edge at right angles to the seam is folded and sewn in running stitch with the same kind of sewing-silk. The selvage more closely woven than the main weave. Cl. 52 × 34—24
4. Three frs. of natural taffeta, sewn together with weaving silk. Stitching marks along one edge. Cl. 56 × 34
5. Fragm. of natural silk fabrik, woven in 6-heddled warp twill (3—1—1—1), overlaid with dark pitchy substance. Hem fold

- at one edge which is cut obliquely; stitching marks indicate that the fabric was once drawn together. Cl. 48 × 20
6. Two frs. of sewn bands of light-brown, prob. natural silk damask, cut along the warp, and with stitching marks along the edges. Ground 3-heddled warp twill (2—1), indistinct pattern in 6-heddled weft

twill (5—1). L. 24.2 cm. W. 3.4 cm.
Cl. 52 × 36

7. Fragn. of greyish brown fabric of camel's (?) hair-yarn. Warp double z-sp. threads (Th. 0.08 cm), weft loosely woven of z-tw. threads (Th. 0.2—0.5 cm). One s-tw. z-sp. hazel wool thread is sewn into the fabric. Cl. 4 × 2

House K 705 has been very small. The ground surrounding the decayed remains looks quite black, being covered by small pieces of slag. The finds, from different periods, were collected by Boyan.

K. 13705:

- | | |
|--|--|
| <p>1. Copper coin, <i>Ta-ts'üan-wu-shi</i>, a little damaged. Diam. 25 mm</p> <p>2. Bronze arrow-head of the triangular Han type with traces of a bronze tang, and straight corners partly directed upwards; the edges are cracked and the point blunt. L. 30.5, W. of sides 10 mm</p> | <p>3-4. Two pieces of refuse from casting of bronze</p> <p>5. Earthenware net-sinker of B-type with longitudinal and crossing grooves. L. 3, Br. 1.5 cm</p> <p>6-8. Three pieces from rim of wide stoneware bowls with white-yellow glaze on thin, light yellow body</p> <p>9-10. Two pieces of slag</p> |
|--|--|

House K 706 is preserved only in the form of a wall made of "block" bricks. Pieces of slag were seen around the remains.

K. 13706:

- | | |
|---|---|
| <p>1. Fragn. of flat bronze ring, rather large. Diam. 5, Br. 0.9—1, Th. 1 cm</p> <p>2. Small piece from rim of thin stoneware cup, white-yellow Ting ware</p> <p>3-4. Two pieces of probably one stoneware cup, celadon ware, with crackles. On inside traces of design consisting of thin, incised lines</p> | <p>5. Piece from rim of fairly large stoneware vessel with white-yellow glaze on buff body</p> <p>6. Half of spindle-whorl made of dark grey potsherd with crossing cord-impressions</p> <p>7. Two pieces of metal slag</p> |
|---|---|

Fort 31 is very much decayed and consists of a small walled rectangle, 9 × 10 m, made of stamped clay. The walls have a thickness of about 1.5 m. No finds were made here.

House K 707

K. 13707:

- | | |
|--|---|
| <p>1. Long bronze hair-pin, of same type as on Pl. 35: 18, nearly complete except for a part of the top, where there are now six ring-shaped offsets in a row; below these are a few obliquely incised lines. The lower end is flattened and sharply pointed. L. 15.3 cm</p> <p>2. Piece from rim of thin-walled bronze vessel (?), prob. 7.3 cm in diam; Th. 2 mm at the rim and becoming very thin below</p> | <p>3. Fragn. of small bronze ring of round wire, diam. 18 mm and Th. 2.5 mm</p> <p>4. Fragn. of coarse nail of refuse from casting of bronze</p> <p>5. Various bronze pieces: small fragments, refuse from casting and pieces of slag</p> <p>6. Spindle-whorl made of light grey potsherd. Diam. 3.3 cm</p> |
|--|---|

House 32 is built at the edge of a mound, and near to this ruin was seen a quern-stone.

House K 708 has large accumulations of slag around it and at least two rather large *tatis* to the south and southwest.

K. 13708:

1. Small fragm. of a coin, with a *Ta* at top of legend
- 2-3. Two strongly corroded frs. of coins, prob. of Sung types
4. Two pieces of a coin, *Yüan-feng-?-pao*
5. Ditto, a *ho* as the second character
6. Small piece of thin bronze wire, which is wound at one end with finer bronze thread. Prob. from ear-pendant
7. Various bronze pieces: fragments, sheet and refuse from casting
8. Fragm. of spool-shaped bead of greenish, un-transparent glass
9. Straight spiral bead of blue-green glass. L. 10 mm. Pl. 30: 39
10. Very small spherical bead of blue-green glass
11. Piece from rim of small porcelain cup, thin greenish white Ting-like ware
12. Small piece of stoneware bowl or cup with thin light yellow glaze. On the inside ornaments in red and light green
13. Small piece of stoneware bowl, Ts'i-chou ware, with now light yellow, transparent glaze on yellowish red body. One spot of blue-green enamel left of otherwise flaked-off on-glaze decoration
- 14-16. Two pieces of chalcedony and one piece of flint

Houses 33 and 34 are built of "block" bricks, one of the walls of the latter ruin being about 2 m high.

Tati K 709 was excavated by Chin the day before the mapping and yielded finds from different periods.

K. 13709:

1. *Wu-shu* coin. Diam. 25 mm
2. Fragm. of ditto
3. Fragm. of coin with indistinct legend, poss. *Hi-ning-yüan-pao* (1068—77). Diam. 25 mm
4. U-shaped bronze hair-pin (cf. Pl. 35: 20) made of round wire which is thickest at the ends and at the bend. L. 13 cm
5. Small cubic bronze knob with broken-off round wire at the base. Probably top part of ear-pendant. The wire is wound with thin bronze thread, and the top cube is chamfered on all surfaces. Well made. Fig. 00
6. Small rectangular plate of sheet-bronze with perpendicular offset, the latter with a hole at the centre, through which two links of wound bronze thread are drawn. Size of plate 21 × 11 mm. Pl. 38: 1
7. Portion of bronze ornament, consisting of two small discs cast in one. A large thick rivet on back of the disc. Fronts have a shallow pit. Unique. L. 12, W. (diam.) 8, Th. 3 mm
8. Small bronze ring. Diam. 16, Th. 3 mm
9. Various bronze pieces: sheet, fragments including a piece of wire ear-pendant, and refuse from casting
10. Fragm. of spool-shaped bead of blue glass with inlaid coils of brown glass. L. 10 mm
11. Small scraper of white chalcedony, retouched on all sides
12. Two pieces, now glued together, from rim of fairly large stoneware vessel, Ts'i-chou ware. Vigorous sgraffito decoration: a border of wreath above a row of petals in brown glaze on bare, reddish yellow biscuit. The inside fully glazed in the same shade of brown. Pl. 22: 13
- 13-14. Two pieces from prob. one stoneware bowl, Kün ware, with very thick, light green-grey glaze on light grey body. Also stains of reddish purple on the inside glaze
- 15-19. Five more or less complete spindle-whorls made of grey potsherds. Diam. 4.7—3.1 cm
20. Potsherd with rounded edge, blue-grey ware

Walled Enclosure K 710

In the midst of an area densely covered with house ruins and *tatis*, found in the northeastern-most part of the ancient oasis, there is a fairly large fortified enclosure of very much the same shape as K 688 at the Challain-gol but even more irregular. A photographic view of the actual ruin is shown in Bergman's Report, Pl. 16 b, under its preliminary designation "Ruin 100"; he mentions it on pages 145—146 as, possibly, the remains of the ancient administrative centre of the Kü-yen district.

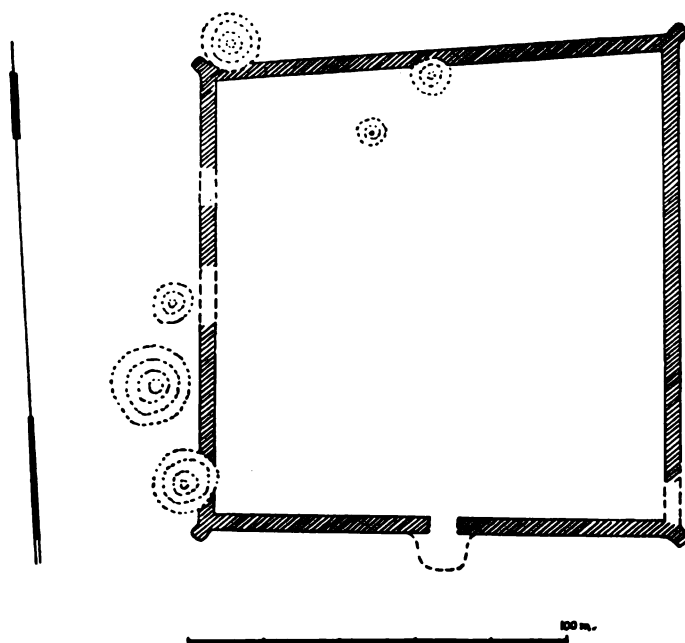


Fig. 47. Plan of Walled Enclosure K 710 (= "Ruin 100" in Bergman's Report)
Hatching = visible remains of wall (of stamped clay, or dissolved bricks), circles of dotted lines = tamarisk cones.

The plan, Fig. 47, shows that the lengths of the walls, beginning with the south face and ending with the east face, are 127, 122, 126 and 131 metres. They are very probably built of stamped clay like K 688, though the possibility of their being built of bricks must be admitted; they are so decayed and worn by wind erosion that the height does not exceed 1.7 m, the thickness at base (originally) being about 4 m. Each corner of the enclosure is strengthened with a rectangular, projecting part, and at the middle of the south face there is an opening, which is most likely the gate, the other three openings probably being due to wind erosion.

The interior is flat, and only a trained eye can detect traces of a couple of walls from houses, but no complete ground-plan of such remains can be made out. Digging in the low remains of what must once have been houses brought only burnt layers to light. Bricks were seen lying scattered on the ground of the interior, some with the maker's mark, all strongly worn by the wind; according to photographs showing, inter alia, a few of the bricks at short distance the sizes seem to be the same as for the large Han bricks, or the similar, though thicker, "block" bricks.

Both inside and outside the walls the ground is covered with hundreds of unglazed potsherds, a fair number of which were collected, together with metal objects and other small specimens such as glass beads, all taken from the interior or from the immediate surroundings, especially to the east and south of the enclosure. Several quern-stones, some of them having a diameter of 40—55 cm according to photographs taken at short distance, were also seen inside the walls. No clear difference in the nature of the finds from the inside as compared with those from the outside was traceable.

The sure coin of Han age found at this site, a *Ta-ts'üan-wu-shi*, was collected from outside the walls, the *Wu-shu* and other (*Wu-shu* ?) coins being found on both sides.

It is notable that the collection from here shows such a uniform character with, seemingly, no intrusions of objects from the later period of settlement, i.e. the Si-Hia and Yüan times. On the other hand we cannot be sure that the occupation of this site ended with the Eastern Han dynasty, owing to our defective knowledge of the centuries immediately following it.

<i>Tabulated summary of antiquities:</i>		Approx. number of items
Coins		
<i>Ta-ts'üan-wu-shü</i>		1—2
<i>Wu-shu</i>		15
Illegible frs., prob. <i>Wu-shu</i>		1
Bronze		
arrow-heads		6
bolt of cross-bow mechanism		1
fitting of canopy-rib		1
boss		1
sleigh-bell for strap		1
strap-end ring		1
belt-ring		1
rings for vessels (?)		2
finger-ring		1
sewing-ring		1
plaque in the Animal Style (Pl. 32:4)		1
ornamental pin		1
various small objects and frs., includ. a group		5
Iron		
socketed adze- or hoe-blade, and axe-blades		3
ring for strap (?)		1
U-shaped clamp		1
Beads and related ornaments of		
shells		3
stone		10
glass		27
Cowrie shells		3
Stone		
knives or scrapers		2
whetstone		1
frs. of ornamental pillar (?) and tablet		2
Earthenware or stoneware		
A. Pottery (3 vessels, 6 handles, 1 steamer bottom, 1 leg of tripod, 34 sherds from wall)		45
B. Spindle-whorls		13
C. Net-sinkers		20
D. Ornamental tile, and moulds		3

K. 13710:

- 1-8. Eight *Wu-shu* coins, nos. 2 and 4 (at least) having a short elevated line near the lower edge of the square, central hole.
Diam. 25—26 mm
- 9-10. Two frs. of *Wu-shu* coins
11. Copper coin, *Ta-ts'üan-wu-shi*, with much worn characters of the legend. Diam. 24 mm
12. Small fragm. of copper coin, probably a *Ta-ts'üan-wu-shi* (?)
- 13-16. Four frs. of copper coins, almost certainly *Wu-shus*
17. Fragm. of copper coin, without legend on the preserved piece, showing the same, relatively large, square hole as in the *Wu-shu* type. Diam. 25 mm
18. Twelve small frs. of coins, strongly corroded with illegible legends. Some may be *Wu-shus*
19. Bronze arrow-head of a form which is unusual in the collections: long, narrow with three wing-shaped edges. The solid main part is triangular in section from point down to about one third of the length from the base, which is round; the flat edges are badly damaged, but may have been 3 or 4 mm broad. Traces of a bronze tang.
L. 44, W. of core c. 7 mm. Fig. 9: 5
- 20-21. Two bronze arrow-heads of the common triangular Han type, with rounded straight corners, and traces of bronze tangs.
L. 35 and 28, W. of sides 9 and 10 mm
- 22-23. Two dittos with straight corners, strongly weathered. L. 26 and 28, W. of sides c. 10 mm
24. Bronze arrow-head of form unusual in the collections: short body with upper part triangular in section, and lower part round. The edges end at about two fifths of the length between top and base, the latter showing traces of bronze tang (?).
L. 25, diam. 12 mm. Pl. 33: 4
25. Bronze sleigh-bell for strap consisting of a flattened spherical bell part and a flat, oblong handle part with a rectangular suspension-hole at its end. The bell part is divided half-way by a narrow opening, and inside there is a rounded, oval stone pellet. Unusual type in the collections. L. 5.7, diam. of sphere c. 2 cm. Pl. 33: 25
26. Bronze bolt of cross-bow mechanism, with round section, having a small, round hole near one thinner end and a low, rounded knob at the opposite end. The latter end is a little hexagonal below the knob.
L. 5.3, diam. 1.0—1.2 cm. Pl. 36: 10
27. Bronze ring for strap-end, possibly belt (?), the fore part nearly round, the rear part or strap-holder rectangular with a rectangular hole. L. 3.5, diam. of ring c. 2 cm; Th. and H. of ring resp. 3 and 7 mm. Pl. 33: 21
28. Bronze belt-ring, fore part oval and rear part, or strap-holder, of the same frame pressed into a rectangular shape.
2.2 × 2.7 cm, Th. 4 mm. Pl. 33: 12
29. Fragm. of small bronze fitting for end of a canopy-rib (of wood), consisting of a narrow, round tube with a hook near the closed end, the latter being a flattened spherical knob. L. (4.2) cm
30. Simple bronze finger-ring made of 1 mm thick sheet. Diam. 20, Br. 2 mm
- 31-32. Two frs. of bronze rings, probably handle-rings from vessels or containers.
Diam. 2.9 and 4.4 cm, Th. 3 and 6 mm
33. Fragm. of bronze ornament consisting of a pin of round section, the upper part of which has had a large, flat ring about 3 cm in diameter. The edges of the ring are chamfered. Cast in one. Unique in the collections. Pl. 35: 9
34. Piece of bronze wire with round section.
L. 8.4, Th. 0.3 cm
35. Simple bronze plaque in the Animal Style, the only specimen of its kind in the collections. It is strongly corroded, but certainly represents the type showing a horse having another, much narrower horse standing on its back; this motif is fairly well represented in the MFEA collections of so-called Ordos bronzes. L. 4.2, H. 3.5, Th. c. 0.2 cm. Pl. 32: 4
36. Fragm. of small bronze boss, consisting of a hemisphere with a small hole at the centre, where a rivet may have been attached.
Diam. 15, H. 5 mm
37. Small flat bronze rod with turned-in ends
38. Small oval piece of bronze sheet with a round hole at the centre, possibly head of rivet
39. Small strongly corroded bronze rod, thicker at middle and ends. L. 3.3 cm
40. Two pieces of sewing-ring of bronze, with the usual punched outer surface (cf. Pl. 35: 12). Has been flattened out. Br. 7 mm
41. Various bronze pieces, such as frs. of a vessel, sheet, and (mainly) refuse from casting
42. Cowrie shell (*Cyprea moneta*) with dorsal part ground off. L. 26 mm
43. Smaller ditto. L. 14 mm
44. Fragment of ditto
- 45-47. Three beads made of shell (family Turbo). No. 45 has oval section and flat ends. L. 10—16, Br. 12 mm; no. 46 is a little smaller and rounder, and no. 47 is cubic with 7 mm long sides. All rather unsymmetrical in shape. Pl. 30: 36

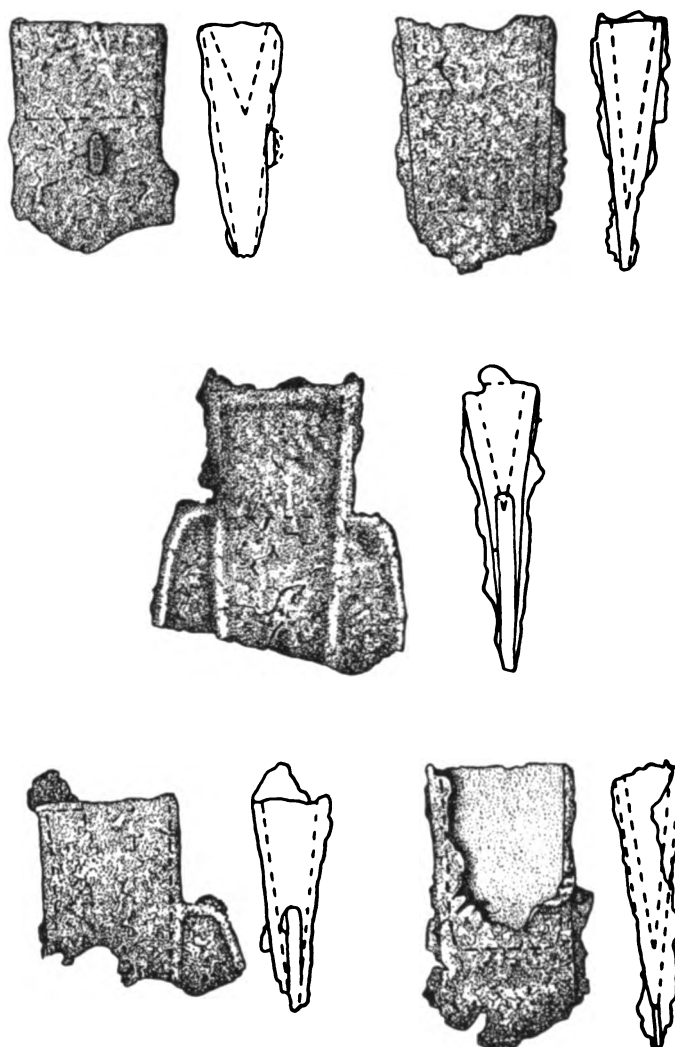


Fig. 48. Socketed iron axe- or hoe-blades with extended narrow-sides. Scale 2/3.
 Top: A. 8: I; 450 (left) and K. 13710: 85, centre: K. 13712: 26,
 bottom: K. 13710: 86 (left) and K. 13743: 43.

- 48-50. Three rectangular, flat beads of dark green, non-translucent glass with rough surface, all having longitudinal holes. No. 48 is 22×14 mm, the other two 14×14 mm. Nos. 48, 50 on Pl. 30: 37
51. Piece of chalcedony, perforated near the centre and retouched along one edge
- 52-53. Two thick ring-shaped beads of light green and yellow glass. Diam. 14 and 13 mm
- 54-55. Two nearly ball-shaped beads of the same dark green, non-translucent, rough glass as nos. 48—50 above. Diam. 12 and 8 mm
56. Double-bead of the same rough, green glass as the previous nos. L. 12, diam. 7 mm
- 57-59. Three very small spherical beads of blue-green glass. Diam. 5 and 4 mm

60. Small ring-shaped bead of dark blue glass. Diam. 6 mm
61. Quadruple bead of blue glass. L. 17 mm, diam. of each separate part 6 mm. Pl. 30: 17
62. Treble bead of dark blue, non-translucent glass. L. 14, diam. 7 mm. Pl. 30: 16
- 63-65. Three small beads of cornelian, shaped like low cylinders. Diam. 8 mm
66. Fragm. of spool-shaped bead of blue-green glass
67. Fragm. of oblong, angular bead of the same green glass as e.g. nos. 48—50 above. L. 12 mm
- 68-70. Three halves of beads, spherical, of the green glass used for the previous no. Diam. 10—9 mm

- 71-73. Three frs. of ring-shaped beads of dark green and blue-green glass
74. Half of small spherical bead of dark blue glass with inlaid white rings of glass
- 75-78. Two drops of dark green glass, and two pieces from blue-green glass beads
- 79-84. Six small pieces of stone beads, partly material for such, including a piece of coral. Pl. 30: 5, 41
85. Fragm. of socketed iron adze- or hoe-blade, a little rusty and weathered. Main part consists of the socket, which is rectangular in section (6.3×2.7 cm at base), wedge-shaped, and narrowing a little towards the actual flat blade, which is almost entirely missing; the latter has probably been of the wide type shown on Pl. 36:24 as there are traces of flat projections on the narrow-sides of the socket, ending halfway to the base. Median ridge on narrow-sides indicates casting in two parts. Upper part of one broad-side shrunk, thus causing the present curve of the profile. L. (10.2), W. 2.7—2.5 cm; Th. of material of socket 5, of side projections 3 mm, thinning downwards. Fig. 48
86. Fragm. of socketed iron axe-blade, weathered and a little rusty. Socket rectangular in section, nearly rectangular in outline but with slightly concave longer sides, one more concave than the other. The narrow-side of the latter has a flat projection, about 2 cm broad, along its median line, beginning 4 cm from the base and continuing downwards into the now missing blade; rim of projection thickened on both sides. But for the asymmetry, this object is of the same type as hoe- or adze-blades like the preceding one, or that on Pl. 36:24. Size of socket ($8 \times 5.9 \times 2.8$, Br. of blade at break c. 6 cm; Th. of material and projection 4 mm. Fig. 48
87. Lower part of socketed iron axe-blade with strongly curved cutting-edge. Wedge-shaped, rectangular in section, with continuous transition between blade and (broken-off) socket; cavity of the latter ends c. 5 cm from cutting-edge, which is cracked into three layers, there being no visible difference in quality between the layers. L. (7.9), base 4.1×2.7 , cutting-edge 8 cm; Th. of material in upper part (socket) 5 mm, of middle layer 3 mm. Fig. 67:6
88. U-shaped iron clamp, consisting of square pin with one end preserved and pointed. Middle part with damaged, flattened projection. 5×6 cm. Pl. 37: 17
89. Fragm. of small iron ring, possibly from strapping
90. Earthenware vase, complete except for a part of the lip. Body flattened spherical, neck low, and rim everted horizontally; base flat. Borders of very indistinct, oblique cord-impressions run around the middle part of the body. Light greyish brown, homogeneous paste, hardness Mohs 5.0. Diam. of lip 7.7, of neck 5.6, of belly 15.7, of base c. 8 cm. H. 12.5 cm. Pl. 19: 1
91. Small earthenware vase with neck missing. Biconical body. Blue-grey, homogeneous paste tempered with white (lime ?) particles, hardness Mohs 5.0. Dark grey, rather glossy surface, possibly from thin coating. Diam. of belly 6.2, of base 3.5 cm. H. (5) cm. Pl. 19: 3
92. Fragm. of small, low earthenware bowl of the "lamp" type (see Pl. 20: 5). Blue-grey paste. Diam. of mouth has been 8.6, of base 5.2 cm. H. 3.2 cm
- 93-104. Twelve earthenware net-sinkers of B-type, with longitudinal and crossing grooves. L. 5.6—2.7, Br. 1.8—0.9 cm. Pl. 20: 8, 9
- 105-107. Three frs. of dittos
- 108-112. Five spool-shaped earthenware net-sinkers of A-type, with longitudinal hole. No. 108 is one of the largest in the collections, its length being 5.5 cm, its diam. 2.7 cm
113. Half of a crescent-shaped knife or scraper of slate, the nearly straight edge being the cutting-edge; two holes at middle near the cutting-edge. L. (10), reconstructed L. c. 18, Br. 4.8 cm. Pl. 20: 10
114. Fragm. of ditto, from the middle part, with two holes more near the longitudinal axis. Br. 4.7 cm
115. Fragm. of oblong whetstone of reddish purple slate, with square section
116. Small rectangular plate of purple, semi-translucent crystal (?)
- 117-126. Ten spindle-whorls made of potsherds of grey, reddish brown and dark blue-grey ware. Diam. 7.5—2 cm
- 127-129. Three halves of spindle-whorls made of grey potsherds. Diam. 5—3.1 cm
- 130-132. Three large ear-handles of rough, unglazed stoneware vessels with small remaining portions of the wall. Different kinds of grey, partly sand-tempered paste. L. 7.5—5, Br. 3.5—2.5 cm
- 133-135. Three handles, the first broken off from a rough, unglazed stoneware vessel, the other two from earthenware vessels. The latter ones, more semi-circular than the others, seem to be from the same vessel. No. 133 is of reddish brown, homogeneous, slightly sand-tempered paste; the other two are of A-paste

- 136-137. Two pieces from bottom of earthenware vessels, both with a few large, round holes probably steaming-holes. No. 136 is of light brown, homogeneous paste, the other fragm. of A-paste
138. Fragm. of small earthenware vessel with strongly bulging belly and thick wall. A-paste. H. has been c. 8 cm
139. Fragm. of tube-shaped spout (?) of rough, unglazed stoneware vessel. Dark grey, homogeneous paste with glossy surface, possibly from some kind of coating. Th. of wall 6 mm
140. Ditto of earthenware vessel. Light brown paste with dark grey surface
141. Piece from rim of fairly large rough, unglazed stoneware vessel with strongly bulging belly. The shoulder is decorated with two borders of incised parallel lines, and between these a "combed" wavy band. Blue-grey, homogeneous paste; hardness Mohs 6.0
142. Piece from rim of fairly small earthenware vessel with rather bulging belly. Two holes drilled through neck and one through shoulder. Round the neck runs a carelessly incised wavy line. Diam. of mouth has been c. 10 cm. A-paste. See below no. 144
143. Piece from neck of small rough, unglazed stoneware vessel, decorated with simple incised zigzag line around. Dark grey, homogeneous, sand-tempered paste; hardness Mohs 6.5
144. Potsherd belonging to the same vessel as no. 142. Has two round holes drilled through
145. Piece from lower part of belly of earthenware vessel. On outside there are some grooves, radiating from centre of under-side. A-paste
146. Large piece from rim of rough unglazed earthenware vessel which has been very large and bulging. Surface of outside covered with wide-meshed, impressed lozenges, crossed by two borders of incised lines around. Blue-grey, homogeneous paste; hardness Mohs 5.5
147. Ditto, without the annular lines, and with light brown, homogeneous paste of hardness Mohs 5.5
148. Piece from neck of fairly large rough, unglazed stoneware vessel, covered with impressed close-meshed lozenges. Grey, homogeneous, sand-tempered paste; hardness Mohs 7.0
149. Large piece from rim of fairly large rough, unglazed earthenware vessel with wide mouth, the rim being almost vertically everted. Indistinct pattern of impressed close-meshed lozenges. Two holes indicate ancient repair.
- Light grey, homogeneous paste with glossy surface on outside; hardness Mohs 5.5
150. Large piece from rim of large rough, unglazed stoneware vessel, rather clumsily made and with strongly bulging belly. Surface of outside covered with carelessly incised borders of "combed" straight or wavy lines, loops, ovals, etc. Grey, homogenous, sand-tempered paste; hardness Mohs 7.0. Pl. 19:10
- 151-152. Two pieces from large rough, unglazed earthenware vessel which has been very large; "herring-bone" pattern. Grey, homogeneous paste; hardness Mohs 5.5
153. Fragm. of earthenware vessel with carelessly incised wavy lines below each other and above an annular scoring. A-paste
154. Piece from fairly large rough, unglazed earthenware vessel with a 2.5 cm broad border of incised, crossing zigzag lines or large lozenges. Two holes from ancient repair. Blue-grey, homogeneous, sand-tempered paste; hardness Mohs 5.5
- 155-156. Two frs. of probably one earthenware vessel, the surface of outside decorated with irregularly applied pattern of small circles, impressed by means of the end of a reed-stalk or similar article. Light brown, homogeneous paste. No. 155, Pl. 19:6
157. Small fragm. of rough, unglazed stoneware vessel decorated with an incised festoon design between annular scorings. Dark grey, homogeneous, sand-tempered paste; hardness Mohs 7.0
158. Sherd, decorated with border of "combed" wavy lines. Light grey, homogeneous paste; hardness Mohs 5.5
159. Piece from fairly large earthenware vessel with incised pattern resembling that of no. 150, though only small portion is preserved. Light brown, homogeneous paste; hardness Mohs 4.0
160. Piece from rim of earthenware dish or low bowl with three parallel annular scorings below rim on the outside. A-paste
161. Fragm. of rather small rough, unglazed earthenware vessel with wavy outside. Dark grey, homogeneous paste; hardness Mohs 5.5
162. Piece from fairly small earthenware vessel with wavy outside. Paste grey in middle, changing into a lighter shade towards the surfaces; hardness Mohs 5.5
163. Small fragm. of earthenware vessel with applied, raised band of the same material. Coarse, sand-tempered brick-like paste
- 164-165. Two frs. of rough, unglazed earthenware vessels with narrow, impressed borders of

- lozenges. Grey, homogeneous paste, no. 165 slightly sand-tempered; hardness Mohs 5.5. No. 164, Pl. 19:7
166. Fragm. of large earthenware vessel with crossing cord-impressions. Blue-grey, homogeneous paste
 167. Fragm. of large rough, and unglazed earthenware vessel with crossing cord-impressions. Blue-grey paste, hardness Mohs 5.5
 168. Ditto of earthenware vessel, crossing cord-impressions. Blue-grey paste, hardness Mohs 3.0
 169. Ditto of earthenware vessel, same kind of surface treatment. A-paste
 170. Leg of earthenware tripod vessel. Nearly oval section, and thinner at middle part. A-paste. L. 11 cm
 171. Fragm. of perforated bottom of steaming-vessel for cooking. A-paste. Pl. 19:13
 172. Fragm. of mould (?) of stoneware
 173. Ditto of another type with three large, round holes, one of which runs perpendicular to the others. Pl. 20:12
 174. Fragm. of ornamental tile of stoneware, possibly leg of table or other kind of structure, with surface decoration of incised crossing lines, and incised simple human face on one side. Large round hole from each of three sides. Pl. 20:7
 175. Fragm. of ornamental piece of limestone, prob. of round section, with projecting shelf around middle of the preserved piece. Th. of main part c. 6 cm. Pl. 20:11
 176. Pieces from one corner of a square or rectangular ornamental plate of slate, decorated with a carved border of stylized wreath on one side, the other side only partly worked. Traces of probably the same kind of design on the narrow-sides. Size c. (12) × (7.5) cm. Pl. 20:19

Tati K 711 covers a large space some hundred metres east and SE of the preceding ruin. Only the first half of the collection is clearly localized to "about 150 m E of the fort". The excavation was apparently supervised by Bergman, who also made some diggings himself. There seems to be no difference between the finds made at this first site east of the fortified enclosure, and the finds made at this and other points of the tati, comprising the second half of the collection. It is noteworthy that all the coins found are of the *Wu-shu* type and that hardly any of the other objects show any characteristics of the Si-Hia or Yüan periods.

K. 13711:

- 1-7. Seven *Wu-shu* coins, of which nos. 1 and 3 have a short, horizontal, raised line below the lower edge of the square hole. No. 1, see Pl. 33:7
8. Copper coin without legend or outer edge, the large size of the square hole resembling that in *Wu-shus*. Diam. 18 mm
- 9-10. Two frs. of copper coins with a *-shu*
- 11-12. Two dittos with a *Wu-*
13. Piece from rim of a copper coin, probably a *Wu-shu*
- 14-18. Five triangular bronze arrow-heads of the common Han type, all with straight corners, and on two specimens, traces of bronze tangs. No. 16 has a large, 8 mm deep rectangular tang-hole. L. (34), 27.5, 32, 31 and (28) mm, W. of sides 12—10 mm
- 19-20. Two frs. of small bronze fittings for canopy-ribs of wood, with a hook near the closed end
21. Large bronze hair-pin, U-shaped with round shanks and flat ornamented bend. On both sides of the latter the decoration represents a dragon's head with mouth wide open. The points of the shanks are broken but preserved. Unique type amongst hair-pins in the collections. L. 19.2 cm. Fig. 49, and Pl. 35:19
22. Thin bronze ring, bent to a heart shape. Th. 1.5 mm
23. Piece of flat bronze ring, possibly from harness mount (?). Diam. 3.6 cm, section 3 × 1.3 mm
24. Two pieces from a bronze rod, bent into a semi-circle
25. Small bronze ring, formed of a bent rod. Th. c. 2 mm
26. Bronze bolt from a cross-bow mechanism, with round section and cubic head at one end. At the very base of the opposite end there is a transversing hole. L. 5.5, diam 1.1, size of head 1.3 × 1.3 × 1.2 cm. Pl. 36:11
27. Fragm. of broad, thin bronze ring with a hole near one edge, which is chamfered from the outside. Probably fitting. Diam. 29, Br. 12, Th. 1 mm
28. Various bronze pieces of sheet, refuse from casting, etc.



Fig. 49. Bronze hair-pin,
K. 13711: 21 (Pl. 35: 19).
Half size.

29. Fragm. of iron socketed spade-blade, of rectangular outline and triangular section.
H. prob. c. 4 cm, W. across base 2.4 cm

30. Biconical, square-sectioned bead of cornelian or agate. L. 14, Br. 8 mm. Pl. 30: 27
31. Small spherical bead of light blue glass
32. Fragm. of spherical bead of green, untransparent glass
33. Fragm. of thick ring-shaped bead of red chalcedony
34-36. One complete and two fragmentary earthenware net-sinkers of B-type. L. of complete specimen 3.8, Br. 1.4 cm
37. Spool-shaped earthenware net-sinker of A-type, strongly weathered. L. 5 cm
38. Piece from rim of large, unglazed earthenware vessel with upright wall and everted rim. Crossing cord-impressions partly effaced by horizontal bands. Light brown, homogeneous paste; hardness Mohs 5.5
39. Ditto, with "combed" festoon designs and bands incised on the original cord-marked surface. Core of paste brown, turning into grey towards the surfaces; hardness Mohs 5.5
40. Two pieces matching each other from large, rough, unglazed earthenware vessel. Pattern of "combed" festoons. Core of paste light reddish brown, turning into grey towards the surfaces; hardness Mohs 5.5
41. Very small whorl, spindle-whorl ?, made of grey potsherd
42. Half of spindle-whorl made of brick-red potsherd

Watch-tower 35 measures 5.5 m square at the base, and rises to a height of about 3 m. It is built of stamped clay.

Tati K 712. It is now impossible to determine whether it is here a question of one *tati* or several continuous *tatis*. Two excavations were made, one immediately east of the previous tower, and the other two days later immediately SE of the same ruin. The finds seem to be from two different periods, probably Han or at least "Wu-shu" times, and "Khara-khoto" times respectively. The finds found in the eastern part of the *tati* (nos. 7, 8—12, 16—18, 26—27 have been thus localized) may belong to the more ancient period, while e.g. the 12th century coin, the glass beads and the "various bronze pieces" possibly all date from the later period, being collected from the other part of the *tati*.

K. 13712:

- | | |
|--|---|
| <p>1-4. Four <i>Wu-shu</i> coins, of which no. 3 has a short, horizontal, raised line beneath the hole. Found in the SE part of the <i>tati</i>. Diam. 25 mm
5. Fragm. of <i>Wu-shu</i> coin
6. Fragm. of copper coin, prob. <i>Sheng-sung</i> (<i>t'ung-pao</i>), (1101 A.D.)
7. Four strongly corroded frs. of copper coins, probably <i>Wu-shus</i></p> | <p>8-9. Two bronze arrow-heads of the common, triangular Han type, with more or less straight corners. No. 8 has a small triangular depression at middle of one side, and no. 9 a somewhat blunt point. Desert patina.
L. 33 and (32), W. of sides 9 and 7 mm
10-12. Three dittos, strongly corroded and more or less damaged</p> |
|--|---|

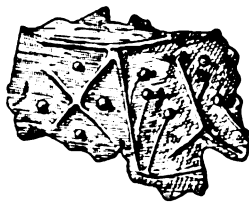


Fig. 50. Side fragment of a small bronze bell with relief pattern, K. 13712: 24. Nat. size.

13. Ditto of unusually large size, with straight corners and at least one triangular depression. Traces of an iron (?) tang. L. 45, W. of sides 11 mm
14. Three-winged bronze arrow-head with conical solid part (body), and thin, straight wing-shaped edges. Traces of bronze (?) tang. L. (38), reconstr. L. 47, W. of sides includ. wings 18 mm. Pl. 33: 5
15. Fragmentary bronze cross-bar of sword-hilt, oblong in vertical plane, and narrow rhomboid in horizontal plane. L. 5 cm. Pl. 36: 5
16. The small hook of a bronze fitting for canopy-rib of wood
17. Short, wide bronze cylinder, possibly shoeing of a *Ko* halberd handle. Near the open end there are two small holes opposite each other for fastening the shoeing to the handle. Now filled with hard packing of gravel. Unique. L. 5.9, Diam. 3.8—3.5 cm; Th. of material 3 mm Pl. 36: 15
18. Small cylindrical bronze container with an 11 mm high lap for receiving a cover. Near and below this lap there are two small circular ear-handles opposite each other. Unique. H. 8.1, Diam 3.6 cm; Th. of material c. 3 mm. Pl. 36: 16
- 19-20. Two small frs. of a bronze boss, very thin. Diam. c. 2 cm, H. has been 1.5—1.7 cm
21. Small bronze dog, probably used for repairing pottery. L. 23 mm. Pl. 38: 18
22. Fragn. of bronze sewing-ring with punched surface. Br. 8 mm
23. Bronze ear-pendant consisting of a curved wire of oval section with a ring-shaped bead of blue glass threaded on to one thinner end, which is also wound round with bronze thread holding the bead in place. There is a tiny piece of turquoise (?) at the very tip of this end, as is the case in a few other ear-pendants in the collections. L. 5.7 cm. Pl. 32: 4
24. Two frs. of a smallish bronze bell with simple relief pattern of diagonal lines crossing each other and small dots in the intermediate spaces. The form of the bell has probably been nearly trapezoid in outline and rectangular in section, the broad-sides a little vaulted. Th. of material 1.5 mm. Fig. 50
25. Various bronze pieces: fragments, pieces of sheet, and refuse from casting
26. Large fragm. of socketed iron hoe-blade, weathered and rusty. Socket has rectangular section and outline, and is wedge-shaped in profile, a little narrowing, though, towards the broken-off cutting-edge. The latter has been widened by means of side projections, ending about 4.5 cm from the base of socket; edges of projections thickened. Clear traces of casting-ridges along median line of the narrow-sides above the projections. L. (11.4), reconstr. L. 13, base of socket 5.9 × 2.9, reconstr. Br. of cutting-edge 10.3 cm. Th. of material 5 mm, of the projections 3.5 mm, their edges 7 mm. Fig. 48, and Pl. 36: 24
27. Socketed iron axe, weathered and a little rusty. Rectangular in section and outline, though the latter narrows a little towards the partly damaged cutting-edge. Depth of cavity 5.7 cm. L. (8.1), reconstr. L. 8.3, base of socket 5 × 3.2, Br. of cutting-edge 4.5 cm. Th. of material 5 mm. Pl. 36: 23
28. Cowrie shell (*Cyprea moneta* Linné) with a hole pierced through near the narrow end. L. 18 mm
29. Small cowrie shell with dorsal part ground off. L. 14 mm
- 30-31. One complete and one fragmentary bead of cornelian or chalcedony
- 32-36. Five complete or fragmentary earthenware net-sinkers of B-type. L. 3.6—2.9, Br. 1.8—1.1 cm
- 37-39. Three spool-shaped earthenware net-sinkers of A-type. L. 5—3.2, Diam. 2.5—1.1 cm

Tati K 713 was never visited by Bergman, only by Wang, and therefore the position of this ruin is only approximate. High dunes cover the ground around the *tati*, which is one of the easternmost cultural deposits of Erego-khara-burukh (the last one of this consecutive row).

K. 13713:

1. Nearly square knife of completely ground dark grey stone with two biconical holes at the middle. The rather blunt cutting-edge is a little convex, and the thickness is greatest between the holes and the cutting-edge. H. 7.1, Br. at the cutting-edge 7.3, at the back 6, Th. c. 1.7 cm. Pl. 20: 15

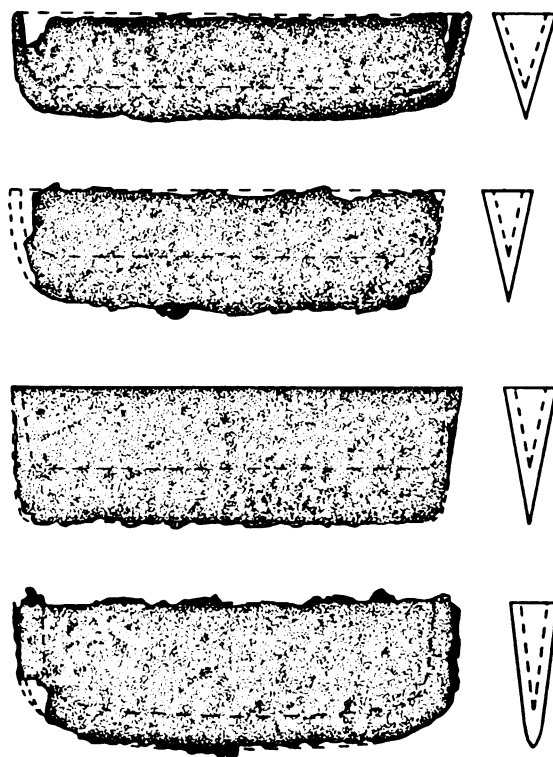


Fig. 51. Socketed iron spade-blades (the rectangular type referred to in the lists).
Scale 2/3. From top to bottom: A. 20: 1, A. 8: II D; 21. a, K. 13714: 1
(Pl. 36: 19), and A. 8: II; 219 (Pl. 5: 13).

2. Oblong, flat piece of slate with a biconical hole through the middle. One of the narrow-sides is well ground. Possibly fragm. of crescent-shaped knife. L. 9.2 cm
3. Rectangular piece of slate with unfinished hole worked from both sides near one end, prob. suspension-hole. 5.7×2.9 cm

House 36 is situated SE of Tsondol, and is the first ruin of the second consecutive row on our map. It is of medium size and built of bricks, now strongly decayed. Excavations were made, but no finds collected.

Watch-tower K 714 is made of stamped clay and measures 4×5 m; H. 3—3.5 m. A quern-stone and potsherds of K. K. type were seen by Bergman at this tower, but the two collected objects were in fact found by Mate on another occasion. It is notable that this ruin lies on the same straight line as the At-tsonch line of ruins.

- K. 13714: 1. Socketed iron spade shoeing, nearly rectangular, with triangular section and straight cutting-edge. Strongly weathered. L. 18, Br. 5.5, base 2.1 cm wide; Th. of material 4 mm.
Fig. 51, and Pl. 36: 19
2. Spindle-whorl made of greyish potsherd. Diam. 4.3 cm

Watch-tower (?) 37 was probably never visited by Bergman, though he mapped it on a route as a "watch-tower". The same word was used by him in his Diary, but in one of his find lists he calls this ruin a "house", possibly by mistake.

House K 715 is hardly visible, as it is much decayed. Several quern-stones of which three were complete, were seen around the ruin. There are some *tatis* in the neighbourhood, and they may be responsible for the "blended" nature of the collection, which was made by Wang on two occasions.

K. 13715:

- 1-3. Three *Wu-shu* coins. Diam. 25 and 26 mm
4. Fragm. of *Wu-shu* coin without rim. Diam. has been c. 21 mm
5. Copper-coin, *King-te-yüan-pao* (1004—08). Diam. 25 mm
6. Fragm. of fairly large copper coin. *Ch'ung* on the top
7. Fragm. of bronze ring, arm- or neck-ring, made of a flat wire twisted in opposite directions. Simple ornaments consisting of small gashes on the broad end and of crossing incised lines on the narrow-sides. Br. 3.5—2 mm. Pl. 35: 17
8. Fragm. of large bronze ring for fitting, furrow-shaped by casting. Inner Diam. 12.3 cm; Br. of horizontal side, which is slightly vaulted, 8 mm, of vertical side 6 mm
9. Various bronze pieces, fragments and refuse from casting
10. Fragm. of prob. pear-shaped bronze bell. 28×32, Th. about 3 mm
11. Spool-shaped bead of cornelian or agate. L. 15 mm
12. Fragm. of ring-shaped bead of yellowish brown chalcedony
13. Fragm. of bead of impure turquoise
14. Piece from rim of pale green bowl, celadon ware
15. Piece from rim with everted lip of porcelain cup, prob. stem-cup, underglaze blue decoration. Outside, portion of sketchy dragon (type as —: 801: 15, Pl. 27: 3). Inside, freely drawn classic scroll around rim. Diam. of mouth c. 11.5 cm. Pl. 28: 5 (inside) and 28: 11 (outside)
16. Piece of small porcelain bowl, blue decoration. Outside, leaf design obliquely emerging from bordering line beneath. Th. 0.3—0.5 cm
17. Spout of very small stoneware pot, Ts'i-chou ware, with white-yellow glaze on light yellow body with white slip

House K 716 is situated near the previous ruin. Bergman hesitated about localizing the following collection to this particular house, which was excavated by Wang. The finds are from different periods if one accepts no. 5 as a fragm. of a *Wu-shu* coin.

K. 13716:

1. Copper coin, *T'ien-hi-t'ung-pao* (1017—22). Diam. 24 mm
2. Fragm. of a *K'ai-yüan* coin
3. Fragm. of copper coin, a *Siang* as the first character
4. Fragm. of copper coin with broad edge, a *yüan* left of the legend
5. Small fragm. of copper coin, probably a *Wu-(shu)*
6. Bronze sewing-ring with punched surface. Diam. 19, Br. 8 mm. Pl. 35: 12
7. Various bronze pieces, fragments and refuse from casting
8. Fragm. of earthenware net-sinker of B-type. L. 3.9 cm
9. Half of spherical bead of yellowish brown glass (?)

House 38 consists of insignificant remains in *burukh* and sand. Bergman saw some potsherds of "Khara-khoto" types on the surrounding ground, but no pieces were collected.

House 39 is situated on gravel with some unfinished quern-stones lying around.

Tatis 40 and 41 are S and SE of the foregoing house ruin. In the vicinity of the first one there were some pieces of quern-stones, and near the other *tati* were seen two grain-hulling rollers of stone, much worn by use.

House K 717 may in reality consist of two medium-sized houses, built of "block" bricks and much decayed. The finds were made by Wang, and are from different periods.

K. 13717:

1. *Wu-shu* coin with short raised, horizontal line below lower edge of the square hole. Diam. 26 mm
2. Well-preserved copper coin, *Sheng-sung-yüan-pao* (1101 A.D.). Diam. 24 mm
3. Short, flat handle of bronze, possibly of a mirror (?). Broken off across two large, round holes at the base; at the middle of the free end there is a small suspension-hole. The edges are decorated with simple raised "rope" pattern. Unique. L. 5.3, Br. 2—1.5 cm; Th. c. 1—0.5 mm
4. Various small bronze pieces, fragments and refuse from casting
5. Spherical bead of white glass. Diam. 9 mm
- 6-13. Eight sherds of rather large porcelain vase of

yü-hu-ch'un shape. Transparent greenish glaze on outside with red under-glaze painting of plants and flowers. Inside is unglazed, the biscuit being rather rough; the paste, however, is of the same fine texture as the blue-and-white porcelain ware. Built in horizontal sections luted together with slip. Unique in the collections. Pl. 27: 1—2

14. Small piece from rim of porcelain bowl, of Ying-ts'ing type
15. Small piece of stoneware bowl or dish; ware of Ying-ts'ing type; inside with whitish glaze over leaf pattern in low relief. Yellowish white body
16. Piece of red brick-like ware with traces of green glaze on outside and brown glaze on inside
17. One piece of flint

Tati K 718 belongs to a "*tati* region", which Bergman has been inclined to interpret as a suburb of the town-like enclosure K 710. Its extension is not clear, but it seems to cover more than 100,000 m², mainly S and E of House K 719. The following collections from House K 719 and the *tati* K 720 properly belong to this *tati* region, according to Bergman. — Fig. 9: 8 shows an artefact which is not described in the list.

K. 13718:

1. Blade of a short knife-coin of *Wu-pai* type (7 A.D.). L. (4.8), Br. 1.5 cm; Th. 3 mm. Pl. 33: 13
2. *Wu-shu* coin with short lines on the front radiating from the four corners of the square hole. According to Schlösser, 184—189 A.D. Diam. 25 mm. Pl. 33: 8
- 3-4. Two *Wu-shu* coins. The character *shu* on no. 4 seems to be somewhat incomplete. Diam. 25 mm
5. Fragm. of *Wu-shu* coin
6. Ditto without outer edge, which has been either cut or cast in that way. Diam. 25 mm
7. Copper coin, *Ta-ts'üan-wu-shi*. Diam. 24 mm
8. Copper coin, *K'ai-yüan-t'ung-pao*. Diam. 23 mm
- 9-10. Two small frs. of copper coins, no. 10 with a *T'ien*
11. Strongly corroded copper coin, possibly a *Ta-ts'üan-wu-shi*
12. Ditto, without visible legend. Possibly a Han coin
13. Ditto, with a small hole, and thus probably later than Han
14. Three small pieces of a (*Wu*)-*shu* coin
15. Two pieces of a very thin and much weathered coin, probably a Han type
- 16-22. Seven small frs. coins, two of which have a *shu*
- 23-27. Four complete and one fragmentary bronze arrow-head of the common triangular Han type. All have straight corners, and some of the specimens show traces of iron tangs. No.

26 has a small triangular depression on one side. L. 33—29, W. of sides 10 mm

28. Fragm. of knife-blade of bronze, the back a little curved, triangular section. Br. 14—11, Th. 3 mm
29. Strap-mounting of bronze, a little bulbous, rectangular outline with lobular edges, two rectangular strap-holes and two rivet-holes. Unique. 2.6×2.6 cm; Th. c. 2 mm. Pl. 34: 18
30. Bronze belt-hanger, consisting of a round vaulted central part decorated with incised checkering lines, and eleven small edging circles with concave depressions on front. The pendant is oval. On back traces of two hoops. L. 3.8, Diam. of main part 3 cm. Pl. 34: 13
31. Bronze belt-ring or -mounting of unique form. Kidney-shaped ring part, closed rectangular rear end. Flat except the rear part, which is slightly vaulted. 4.3×2.7 cm; Th. 1.5 mm. Pl. 34: 1
32. Fragm. of oval strap-end fitting of bronze with rectangular hole. Represents upper part of double fitting, the two plates of which have been attached by means of rivets. Br. 2.5 cm
33. Ear-pendant consisting of bent-up bronze wire of rounded square section. One end is wound round with finer bronze wire, which probably held a bead of some kind. Pl. 35: 8
34. Ear-pendant (?) consisting of an open bronze ring, which at one end has a small bronze knob. Diam. of ring 2.4 cm. Pl. 35: 7

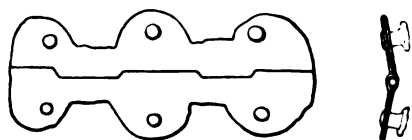


Fig. 52. Hinge of thin bronze sheet, K. 13718: 41
(Pl. 38: 12). Half size.

35. About half of a U-shaped bronze hair-pin.
L. (5.4) cm; Diam. of wire 2.5 mm
36. Strap-dividing triangular ring of bronze.
Unique type. 19 × 15 mm
37. Bronze sewing-ring with the usual punched
lines. Diam. 1.8, Br. 0.7 cm; Th. 1.3 mm
- 38-40. Three small bronze rings of different forms:
no. 38 is flat on one side with the front edge
slanting from the opening. No. 39 is round in
section and no. 40 consists of a thin bronze
band bent into a ring
41. Thin bronze hinge, consisting of two halves of
sheet, each with three iron rivets at semi-
circular projections of the edge. Fig. 52, and
Pl. 38: 12
42. Fragm. of ditto
43. Small oblong bronze plate with a hole in each
end. 2.3 × 0.8 cm
44. Various bronze pieces: fragments, sheet and
refuse from casting
45. Fragm. of iron stirrup which has had an oval
plate for the foot (cf. modern Mongolian stir-
rups). The vertical part of the "frame" is
square in section, 9 × 9 mm. H. c. 14 cm
46. Fragm. of the iron rod of a container for
burning fuel, similar to the modern Mongolian
tollok. L. (13.2), Br. (3.7—3), Th. c. 0.4 cm.
Pl. 37: 10
47. Small piece of strongly corroded iron
48. Small double-bead of blackish grey glass.
L. 7 mm. Pl. 30: 14
49. Half of spherical bead of yellowish brown
glass
50. Ditto of blue-green glass
51. Half of flattened conical bead of dark grey
glass or glass-flux (?) with blue-green spots
smelted in. L. 13 mm
- 52-55. Four frs. of glass beads, yellow-brown, white,
blue-green and green
56. Small shell of fresh-water mussel (*Cyraena*).
Br. 17 mm
57. Piece from shell of large fresh-water mussel
(*Quadrula*)
- 58-59. Two pieces of flint, one possibly a scraper
60. Small piece of stoneware bowl, Ying-ts'ing
ware, with traces of slightly incised pattern of
diverging lines, made by some implement with
several teeth
61. Small piece of stoneware vessel, Ying-ts'ing
ware
62. Piece from stoneware bowl, Kün ware, with
thick, light green-blue glaze on buff body.
Th. of glaze 1 mm
63. Piece from rim of stoneware bowl with blackish
brown glaze on grey body. The rim is double-
folded
64. Small piece of stoneware vessel, Ts'i-chou
ware, with vigorous sgraffito plant pattern in
brown-green glaze on buff body
65. Small moulded earthenware appliqué for vessel,
showing *t'ao-t'ie* mask with ring; concave at
back. Reddish brown ware. Size 4.7—4 cm.
Unique. Pl. 21: 9
- 66-67. Two frs. of earthenware vessels with crossing
cord-impressions. No. 66 of A-paste, no. 67 of
blue-grey paste
68. Fragm. of rough earthenware vessel with border
of close, small impressed lozenges. Light
blue-grey, homogeneous paste, sand-tempered;
hardness Mohs 6.0
69. Fragm. of earthenware vessel with impressions
of oblique lines in alternating directions, the
same "herring-bone" pattern as K. 13710: 152.
Light grey paste. Pl. 19: 9
70. Fragm. of very small pot of dark grey rough
unglazed stoneware. Strongly bulging belly and
everted rim; glossy surface on outside;
H. c. 4.7 cm
71. Fragm. of thin whetstone, made of red sand-
stone and with a suspension-hole at one end
72. Small rounded potsherd of blue-grey ware
73. Spindle-whorl made of reddish brown potsherd.
Diam. 3 cm
- 74-75. Two small spindle-whorls (?) made of grey
potsherds. Diam. 2.1 and 1.7 cm
76. Half of spindle-whorl made of grey potsherd.
Diam. 3.4 cm
77. Half of spindle-whorl made of a *Quadrula*
shell
78. Spindle-whorl made of sandstone with four
diametrically arranged notches in the edge,
giving the disc a crosslike form. Diam. 2.6 cm.
Pl. 23: 8
- 79-84. Six complete or partly fragmentary earthen-
ware net-sinkers of B-type, with longitudinal
and crossing grooves.
L. 4—3.1. Diam. 1.5—1.2 cm
- 85-86. Two spool-shaped earthenware net-sinkers of
A-type. L. 5.5 and 5.7, diam. 2.4 and 2.8 cm

House K 719 consists of insignificant remains within the above-mentioned large *tati* region. The collections from this house were made by Wang on two occasions, the second time possibly mainly from the immediate surroundings and comprising older elements such as the *Wu-shu* coins, the bronze arrow-head, the bronze bell no. 12, the two shell objects nos. 23—24 and the fragments of spool-shaped net-sinkers.

K. 13719:

- 1-2. Two *Wu-shu* coins. Diam. 26 mm
3. Fragm. of *Wu-shu* coin with small raised, horizontal line on front below the lower edge of the square hole
4. Copper coin, *Chi-ta-t'ung-pao* (1308—12). Diam. 23 mm
5. Copper coin, *Yüan-yu-t'ung-pao* (1086—94). Diam. 24 mm
6. Copper coin, *Hien-ch'un-yüan-pao*, with very indistinct legend, on back the character *er* (two) above the hole. (1265—75). Diam. 28 mm
7. Fragm. of copper coin, *Hi-ning* type (1068—78)
8. Strongly corroded fragm. of copper coin, prob. from Han times
9. Triangular bronze arrow-head, of the common Han type, with cut-off barbs at the corners of the slightly convex edges. Large lump of iron rust at the base indicates iron tang. This arrow-head is one of the largest found in the K.K. region. L. without tang 41, W. of sides 10 mm
10. Ear-pendant made of a bent bronze wire with round section and wound round at one end with finer bronze thread
11. Fragment of bronze ear-pendant (?), consisting of two knobs at the end of a broken-off bronze wire. Cf. K. 13721: 15, Pl. 35: 5
12. Small spherical bronze bell, with slit to half height, and a small semi-circular loop for suspension. Contains a small unsymmetrical stone. Diam. c. 15 mm. Pl. 33: 18
13. Small fragm. of bronze ornament consisting of a lanceolate plate with circular end, which has prob. been the centre of a 3-lobular ornament as there are traces of two other, broken-off lobes. Centre of circle depressed except at middle of both sides, where on the back there has prob. been a rivet. Ridged on both sides. L. 2.7 cm. Pl. 32: 18
14. Bronze spindle-whorl (?) with one side flat and the other partly vaulted and decorated with shallow grooves. H. 8, Diam. 25 mm
15. Small piece of bronze band, decorated with simple incisions, and having turned-in ends
- 16-18. Three bent pieces of bronze wire
- 19-21. Three straight pieces of bronze wire, prob. from hair-pins. No. 19 has one end forked and the other end square
22. Various bronze pieces: fragments and refuse from casting
23. Strap or belt ornament made of shell (*Turbo marine*) with rectangular hole. Unique. L. 3, Br. 1.5 cm; Th. 5—9 mm
24. Small, nearly oval plate of thick shell (*Turbo marine*) with two small pierced holes, and on back also a pair of V-shaped holes for fastening the object. Button ? Unique. 19 × 14 mm
- 25-26. Two spool-shaped beads of white glass. Diam. 10 mm
27. Fragm. of double-conical, polygonal bead of dark blue glass
- 28-29. Two small ring-shaped beads of green and white glass
30. Four frs. of glass beads, one brown, two blue and button-like (plano-convex), and the fourth a flattened cone of light blue glass with white spots
- 31-32. Two pieces of stoneware vessels, *Ying-ts'ing* ware, with hardly visible incised pattern
33. Very small piece from side of porcelain bowl with underglaze blue decoration. Outside, central part of chrysanthemum flower-cup. Inside, bordering line between cavetto and bottom (cf. lower part of similarly decorated bowl K. 13811: 2, Pl. 27: 8)
34. Small, low earthenware bowl of the "lamp" type (cf. Pl. 20: 5). Grey paste. Diam. of mouth 6.5, H. 2.1 cm
35. Half of spindle-whorl of light grey potsherd. Diam. 5 cm
- 36-37. Two frs. of spool-shaped earthenware net-sinkers of A-type
- 38-41. Four pieces of flint

Tati K 720 may be regarded as the northernmost point of the large *tati* region K 718 (see above).

- K. 13720: 1. Fragm. of *Wu-shu* coin. Diam. 26 mm
 2. Bead of coral in the shape of a low, a little asymmetrical cylinder
 3. Cowrie shell with ground-off dorsal part. L. 23 mm

House K 721 consists of a small building at the edge of a cone. The finds from different periods were gathered by Chin, who may have dug also in the *tati* region K. 718, which would explain the large number of objects as also their different periods. Actually Bergman was not sure about localizing the collection to this house; in his note-book of finds he has made several alterations in the list of finds, which is not his rule.

K.13721:

1. *Wu-shu* coin. Diam. 26 mm
2. Ditto, with incomplete rim. Diam. 24 mm
3. *Wu-shu* coin, strongly corroded and broken into three pieces
4. Fragm. of (*Wu*)-*shu* coin
5. Copper coin, *King-te-yüan-pao* (1004—08). Diam. 25 mm
6. Copper coin, *Chi-p'ing-yüan-pao* (1064—68). Diam. 25 mm
7. Fragm. of copper coin, *Hi-(ning)-chung-pao* (1068—78). Diam. 31 mm
8. Small fragm. of coin, possibly from the Han period
9. Bronze arrow-head of the common triangular Han type, with straight corners, long base and large lump of rust indicating a once iron tang. L. 34, W. of sides 11 mm
10. Ditto, with straight corners and traces of bronze (?) tang. L. 28, W. of sides 9 mm
11. Fragm. of ditto, with straight corners, rather long base and 2.8 mm wide tang-hole, which ends at the corners. L. (24), W. of sides 8 mm
12. Lower part of bronze seal with one character. Main part cubic, narrowing into broken-off octagonal handle, which is hollow and filled with clay. A small round hole through base of handle. Unique. Size of main part 13×12 mm. Th. of material c. 1 mm. Pl. 32: 23
13. Bronze strap-mounting with lobular edges, two large rectangular holes and two smaller round holes. 2.6×2.9 cm; Th. 2 mm. Pl. 34: 16
14. Bronze object, probably a simple form of the common S-shaped ear-pendant made of real bronze wire (cf. e.g. Pl. 35:4), consisting of sheet rolled into a 2 mm thick tube-wire, then bent to an S-shape with the "seam" along lower side of the "S". H. 4.8 cm. Pl. 35: 3
15. Small bronze ear-pendant with two drop-shaped projections at one end, the other end sharply pointed (for insertion into the ear-lobe). (Cf. K. 13719: 11, consisting of the drop-shaped part.) H. c. 3 cm. Pl. 35: 5
16. Narrow bronze ornament (?) consisting of one tang-shaped end, a profiled middle part and the other end probably ending in a ring, now broken off. Unique. L. 4.4 cm. Pl. 35: 15
17. Small fragm. of bronze finger-ring which has been ovaly widened at one side
18. Fragm. of slightly bent bronze bar, narrowing and round-sectioned towards one end, which is chisel-shaped. L. 6.2 cm
19. Small triangular lead plate with four small holes near the edge for fastening. One side is decorated with crossing granulated lines in relief. Greenish verdigris. Unique. 3×3 cm, Th. 1.5 mm. Pl. 32: 14
20. Various bronze pieces, sheet and refuse from casting
21. Iron key consisting of long, flat, narrow bar which at one end is hammered into a round plate with suspension-hole and at the other end is flattened, bent at an obtuse angle to the bar and provided with a rectangular hole. L. 18.3 cm; middle section 6×3 mm. Pl. 38: 23
22. Awl-shaped iron implement consisting of a 10.6 cm long, square-sectioned pointed bar, widening into a 7 cm long handle, which has square section at base, and tapers into a flat, oval end with oblong suspension-hole. Unique. L. 17.6 cm. Pl. 37: 1
23. Iron ring broken into three pieces. Diam. 4, Br. 1.5, Th. 0.6 cm
24. Lanceolate iron piece, much weathered, of even thickness. Probably upper part of tang
25. Strongly weathered, broken piece of iron, rectangular and now with cross-shaped section. L. 5.2 cm
26. Cowrie shell with ground-off dorsal part. L. 18 mm
27. Fairly large spherical bead of yellowish brown glass. Diam. 16, H. 9 mm
- 28-29. Frs. of two thick ring-shaped beads of yellowish brown glass. Diam. 14, Th. 6 mm
30. Half of spool-shaped bead of yellowish brown glass. Diam. 11 mm
31. Spool-shaped cornelian (?) bead. L. 15, Diam. 7 mm
32. Half of spool-shaped bead of blue-black glass with smelted-in, white stripes. Diam. 10 mm. Pl. 30: 31
33. Short spiral-shaped bead of blue-green glass. L. 9 mm
34. Flat, five-lobular rosette-shaped bead of blue-green glass. Diam. 12 mm
- 35-41. Seven ring-shaped beads of blue-green glass, all of nearly the same size. Diam. c. 13 mm

42. A few small pieces of glass beads, white, yellow and blue-green
43. Earthenware net-sinker of B-type, with longitudinal and crossing grooves. L. 2.7 cm
44. Fragm. of ditto
- 45-46. Two fragmentary spool-shaped earthenware net-sinkers of A-type. L. 2.7 cm
- 47-48. Two spindle-whorls of grey potsherds

House K 722 is made of "block" bricks and is of fairly large size, 27 × 15 m. There is a possibility that this measurement includes a yard, according to a note by Bergman. The remains lie south of and near the *tati* region K 718. Among the objects found there are two specimens of special interest: no. 5, which is the only human sculpture in the round in the Edsen-gol collections if one disregards stucco images, and no. 6, which is a fragment of a large "charm coin" probably from Han, without counterpart in the collections, too.

K. 13722:

1. *Wu-shu* coin, with rather indistinct legend. Diam. 26 mm
2. Fragm. of *Wu-shu* coin
3. Two *K'ai-yüan* coins, one fragmentary, which have been attached to each other by thick verdigris. Diam. 25 mm
4. Triangular bronze arrow-head, of the common Han type, with rather blunt point, straight and rounded straight corners, and traces of bronze tang. L. 28. W. of sides 10 mm
5. Small human figure of bronze, with a small round hole between each arm and the body. There is a projection on top of the head, which may be either a cap or the coiffure; the head is relatively large with distinct nose ridge, the other features being hidden by thick verdigris, which also covers the rest of the figure. The arms end without hands on the front, near to

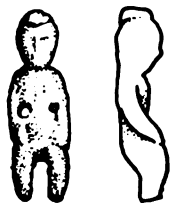


Fig. 53. Small bronze figure, K. 13722: 5 (Pl. 32: 2). Nat. size.

- the sexual organs, which cannot be determined. The belly protrudes. Unique. L. 2.6, Gr. W. 0.85 cm. Fig. 53, and Pl. 32: 2
6. Fragm. of large "amulet coin" of bronze, partly worked through. The nearly oval top part consists of a dragon, bent into a lying 8-shaped loop. The middle, narrower part consists of square frame enclosing a figure representing a winged horse (?). The lower, broken-off part has been rectangular with close braids on both sides, possibly for holding some inlaid substance. Gr. W. 5.2, L. (8.3) cm; Th. from top downwards 5—3 mm. Pl. 31: 1
7. Bronze ear-pendant consisting of an S-bent wire with one end wound with finer, though rather coarse, bronze thread. L. 4.6 cm
- 8-9. Two pieces of bronze pins, one bent and one straight
10. Various bronze pieces, e.g. fragm. of a bronze hinge, and refuse from casting
11. Spherical bead of shell (Turbo marine) with very small hole. Diam. c. 11 mm
12. Small, low conical bead of shell (Turbo marine)
13. Fragm. of bead of turquoise, prob. spool-shaped
14. Half of earthenware spindle-whorl, somewhat pear-shaped with deep, vertical grooves. Diam. 2.7 cm
15. Fragm. of rectangular whetstone of slate with a worn hole at one end. Br. 2.2, Th. 1 cm

House 42 consists of insignificant remains on a *yandang*, with quern-stones around.

House K 723 was never visited by Bergman himself, only by Wang. The position of the ruin is therefore approximate. It is close to a *tati* which is large and situated amongst cones, and this fact may explain the different periods represented in the collection. The following note in Bergman's Diary refers to this very ruin, among others: "Went out in the morning, together with Wang, in order to establish the positions of the house ruins he had explored in the SE, and of course could not help finding others... On the way back we travelled through high dunes, and even there one finds house remains as well as *tatis* on the clay between the high dunes, which

are up to 10 m high and therefore of rather late date. It was terribly difficult to step through the dune-sand, and as I lost contact with Wang, I never found all the house ruins. Back at home again, after I had finished the map, I found, however, that it was fortunately rather satisfactory."

K. 13723:

1. *Wu-shu* coin. Diam. 24 mm
2. Copper coin, *Yüan-yu-t'ung-pao* (1086—94), strongly corroded. Diam. 24 mm
3. Ditto with broad rim, somewhat fragmentary. Diam. 25 mm
4. Fragm. of copper coin, *Hi-(ning)-yüan-pao* (1068—78). Diam. 25 mm
5. Fragm. of copper coin, prob. a *Huang-(sung)* type (1038—40)
6. Small octagonal bronze tube with clay core for casting left inside. L. 3.1, Diam. 1.1 at base and 1 cm at opening; Th. of material 1 mm
7. Small rectangular sheet of bronze with a hole at each end, bent together
8. Part of coarse bronze ring (?), casting reject
9. Various bronze pieces, mainly refuse from casting
10. Strongly weathered, spool-shaped piece of iron. L. c. 6.3, Diam. c. 2.1 cm
11. Small, flat iron ring, corroded and weathered. Diam. 1.9 cm; Th. about 2 mm
12. Flattened conical bead of turquoise-coloured glass, with a piece of bronze wire through the hole. Pl. 30: 35
13. Small pellet of red chalcedony
14. Ground piece of chalcedony or agate
- 15-19. Five pieces from one or several stoneware bowls of Ts'i-chou types with simple under-glaze designs painted in red, made complete with small on-glaze lead-silicate designs. Transparent glaze on buff body with white slip. Pl. 23: 3
20. Small, flat earthenware bowl, probably used as a lamp. (Type as in Pl. 20: 5.) Diam. of mouth 7, of base 4, H. 2.5 cm
21. Thick earthenware spindle-whorl, light red paste tempered with sand. Diam. 5.5, Th. 3.4 cm
- 22-30. Nine spindle-whorls made of greyish potsherds. Diam. 4.2—2.5 cm
31. Half of spindle-whorl made of dark grey potsherd
32. Round piece of thick-walled stoneware vessel with brown-green glaze on both sides. Th. 1.5 cm
33. Fragm. of spool-shaped earthenware net-sinker of A-type. L. 5 cm
34. Piece of white plaster with broad red stripe, from wall of the house

House K 724 consists of two houses close to each other, both built of "block" bricks, and a third building made of smaller bricks, possibly a stupa.

K. 13724:

1. Copper coin, *Hien-p'ing-yüan-pao* (998—1000), well-preserved. Diam. 24 mm
2. Fragm. of copper coin, *Siang-(fu)-t'ung-pao* (1008—17). Diam. 26 mm
3. Fragm. of copper coin, a *yüan* as the third character
- 4-7. Four small frs. of copper coins, of which three have a narrow, high rim, and the fourth a broad rim
8. Bronze ear-pendant consisting of an S-bent wire with round section except at the smaller end, which is flattened. L. 5 cm
9. Some pieces of refuse from bronze casting
- 10-11. Two frs. of fairly large iron ring with strong projections on the outer side; wheel-ring? Inner diam. prob. c. 12, H. c. 1.8 cm
12. Short square-sectioned iron bar, possibly raw product for trading. L. 6 cm, section 8 × 8 mm
13. Strongly corroded iron ring, or buckle
14. Small wooden wedge. 8.2 × 1.8 × 1 cm
15. Spool-shaped bead with longitudinal grooves, of yellow glass. L. 12 mm
16. Spool-shaped, hexagonal bead of yellow glass. L. 16 mm
17. Small fragm. of spiral bead of blue glass
18. Three pieces of probably one ring-shaped bead of blue-glazed stoneware
- 19-20. Two pieces of flint, a little retouched
21. Four pieces of flat stoneware bowl, Kü-lu type, matching each other. Poor yellowish grey glaze on buff body. Diam. of mouth has been 17.5, of base 7.2, H. 3.7 cm. Fig. 62: 2, and Pl. 24: 1
22. Four small pieces from rim of stoneware bowl, Kün ware, now glued together. Thick blue-green glaze, on inside a little flamed, on greyish white body
- 23-25. Three small pieces of the same bowl as no. 22 or similar bowl. No. 25 has one dark purple spot
26. Two pieces, matching each other, from rim of a stoneware bowl or cup, celadon ware with

- olive-green glaze. Holes show repair with clamps
27. Piece of stoneware dish, celadon ware with whitish body
 28. Piece from rim of stoneware bowl, "Feather-combed" ware (with marble effect). Thin, greenish, transparent glaze covers rim, which is made separately of the buff ground-paste, and the side below, which shows pattern of irregular dark brown curves in the ground-paste. Three round holes, bored through below the rim, indicate ancient repair. L. of preserved rim portion 4 cm. Pl. 23: 11
 29. Small piece from rim of stoneware cup, Ts'i-chou ware, with yellowish transparent glaze on white slip, on inside red underglaze lines around, and one light green lead-silicate on-glaze spot
 30. Small piece of stoneware vessel. Northern celadon ware with leaf-pattern in slight relief on the outside. Pl. 25: 6
 - 31-33. Three pieces from rim of different stoneware vessels. Ting-like ware, with rather poor white-yellow glaze
 - 34-37. Four pieces of stoneware bowls with black-brown and brown-green glazes on both sides. Rather thin greyish body
 38. Piece from rim of rather coarse stoneware vessel with black-brown glaze on both sides
 39. Piece of green-glazed tile
 40. Fragm. of bottom of rather large earthenware vessel with rows of short impressed vertical lines on the outside. Dark grey paste
 41. Round piece of grey potsherd with crossing cord-impressions
 - 42-43. One complete and one half spindle-whorl made of dark grey potsherds

House K 725 is built of "block" bricks, and is situated between fields with a canal on the W side stretching N 6° W.

- K. 13725: 1. Four pieces of bronze sheet and one lump from bronze casting
2. Half of wind-ground spindle-whorl made of light grey potsherd. Diam. 4.8 cm

House 43 consists of three closely connected house ruins, built of "block" bricks.

House K 726 is a hardly visible elongated house ruin built of "block" bricks.

K. 13726:

1. A few small pieces of bronze
2. Spherical bead of light yellow glass. Diam 14, Th. 8 mm. Pl. 30: 6
3. Fragm. of bead similar to no. 2
4. Small biconical, hexagonal bead of dark red cornelian (?)
5. Flattened conical bead of blue glass with a piece of bronze thread through the hole. Probably from ear-pendant. Pl. 30: 34
6. Small unsymmetrical piece of a button-shaped glass plate, possibly for finger-ring
- 7-10. Four pieces from at least two stoneware bowls, Kün ware, with dark blue and light greenish glazes
11. Piece from rim of stoneware bowl, Ts'i-chou ware, with yellowish transparent glaze on white slip. Horizontal grooves on the outside. Pl. 22: 10

House K 727 is situated somewhere between Houses K 723 and K 726 in the dune region and was one of the ruins found and excavated by Wang; it was never visited by Bergman. Actually he was very near it on his route.

- K. 13727: 1-15. Fifteen frs. of spool-shaped earthenware net-sinkers of A-type.
L. 4.7—4.1, Diam. 2.5—2.2 cm

House K 728 consists of very insignificant remains of a small house.

K. 13728:

1. Copper coin, *T'ien-sheng-yüan-pao* (1023—32). Diam. 25 mm
2. Wooden peg with round section, one side straight, the other side curved. At middle a square projection issuing from the straight side; near one end a round hole. Unique. L. 28.3 cm. Pl. 40: 8
3. Nearly half of stoneware bowl, celadon ware, with pale olive-green glaze, consisting of three pieces matching each other. Grey-white body.

- Four bored holes show old repair. Diam. of mouth has been 16, of base 5.8, H. 7.1 cm. Fig. 63: 2
4. Piece from rim of stoneware bowl similar to no. 3. Has been repaired in the same way
 5. Small piece from rim of stoneware bowl, celadon ware, of Ta-yao type, with olive-green glaze and on outside lotus-shaped (?) pattern in slight relief
 6. Piece from bottom of stoneware cup, Ying-ts'ing ware, with white-green glaze. Diam. of mouth has been c. 5.4, H. 1.5 cm. Fig. 61: 3, and Pl. 25: 17
 7. Piece of rim of small distinguished stoneware cup, Ying-ts'ing ware with light greenish glaze
 8. Fragm. of small stoneware wine-cup, Ying-ts'ing ware, with white-green glaze. Diam. of mouth has been c. 5.4, H. 1.5 cm. Fig. 61: 3 and Pl. 25: 17
 9. Piece from rim with slightly everted lip of porcelain bowl, underglaze blue decoration. Outside, petal tip of large lotus below line around rim. Inside, totally blurred plant design below line close to edge of rim
 10. Piece from rim of stoneware bowl with white-yellow glaze and pale grey ornaments on both sides
 11. Small piece of stoneware bowl, Kün ware, with pale grey-blue glaze
 12. Small piece from rim of stoneware bowl with rather poor yellowish grey glaze on light reddish body
 13. Fragm. of rough, unglazed earthenware vessel, with crossing cord-impressions, and annular scorings. Blue-grey, homogeneous paste with grey surfaces; hardness Mohs 5.5
 14. Fragm. from base of rough, unglazed stoneware vessel, plain but cut into vertical facets. Dark grey, homogeneous paste; hardness Mohs 7.0
 15. Spindle-whorl made of brick-red potsherd. Diam. 4.3 cm
 16. Unsymmetrical spindle-whorl, or sinker, of sandstone. Diam. 5.2, Th. 3 cm

House K 729

K. 13729:

1. Fragm. of thin bronze finger-ring with widened front
2. Various bronze pieces, sheet and refuse from casting
3. Fragm. of slender iron stirrup, about half the original size being preserved. The top part of the frame-bar is hammered into rectangular section and has prob. enclosed an oblong opening. The side part is square in section, and the lower part hammered nearly flat; too little of the foot-plate is preserved to allow any definite statement as to its form. H. (12.5) cm, section of side part 5 × 5 mm. Pl. 36: 13
4. Small iron cube, its sides 1 cm
5. Three small iron pieces, of which one may have been an iron arrow-head, and another a tang of such an object
6. Piece of five-lobular rosette-shaped bead of blue-green glass. Diam. 12 mm
7. Small plano-convex piece of blue-green glass, prob. for finger-ring
8. Eight pieces of large stoneware vessel, Ts'i-chou ware, inside partly glazed in brown, outside with transparent glaze on white slip, and underglaze black-painted designs. Thick, buff body. Five of the pieces match each other. Pl. 22: 14
9. Piece of stoneware bowl, Ts'i-chou ware, with transparent glaze on white slip, which on the outside ends above the foot-ring. On the inside, in addition, red underglaze designs, green on-glaze lead-silicate spots. Pl. 23: 4
10. Unsymmetrical spindle-whorl made of grey potsherd with crossing cord-impressions
11. Fragm. of whetstone of green slate, with a hole for suspension near one end

House K 730 consists of two large house ruins and one of smaller size 100 m away, all of "block" bricks. A canal runs W of the buildings and rather close to the ruins. See ground-plan in Fig. 44.

K. 13730:

1. Fragm. of copper coin, prob. (*K'ai*)-*yüan-t'ung*-(*pao*)
2. Fragm. of large copper coin, prob. (*Ch'ung*)-*ning*-(*chung-pao*) (1102—07)
3. Fragm. of copper coin, *Huang-?*-*t'ung*-(*pao*)
- 4-5. Two small bronze clamps for repairing porcelain. The hook-bent ends are wedge-shaped. L. 26, Br. 3, Th. 1 mm
6. Three small pieces of bronze sheet, one w. rivet
7. Half of spindle-whorl made of light grey potsherd

Houses 44 consist of five or six closely connected houses, all built of "block" bricks and situated on a 2 m high *yardang*.

House K 731 is much decayed and stands on a 2 m high *yardang*. Hardly more than a *k'ang* is left of the house.

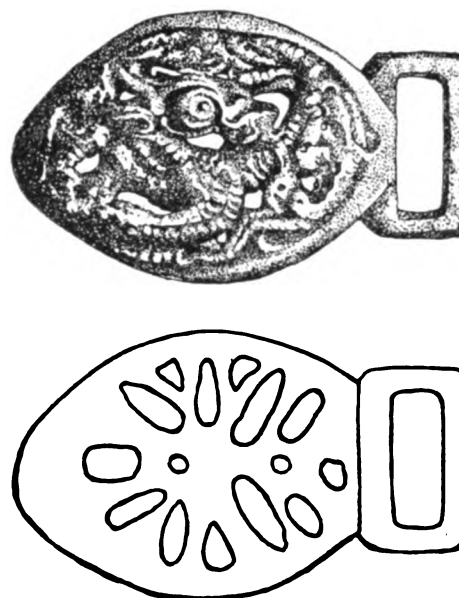


Fig. 54. Bronze buckle, K. 13732: 3. The rounded top-plate (above) is attached by two rivets to the flat under-plate (shown below). Nat. size.

K. 13731:

1. Various bronze pieces, mainly refuse from casting
2. Small pieces of slag, and frs. of melting-pots like the one on Pl. 20: 1
3. Short iron nail with flat head. L. 3.6 cm
4. Small ring-shaped bead of blue-green glass. Diam. 6 mm. Pl. 30: 9
5. Half of spool-shaped bead of yellow glass
6. Half of spherical, yellowish white bead of glass. Diam. 7 mm
7. Piece from rim of stoneware bowl, Kün ware, with blue-green glaze containing plenty of flaws, except on the rim, which is brownish. Light grey body
8. Piece from rim of rather large stoneware

- vessel, Ts'i-chou ware, with light yellowish transparent glaze, covering vigorously painted dark brown ornaments on rather thin buff body. Pl. 22: 12
9. Fragn. of brick-red pot, with traces of green glaze on the outside
- 10-11. Two spindle-whorls made of light grey potsherds
12. Fragn. of small oval plate of white limestone, which is well worked. At one spot on the edge there is a broken-off, oval-sectioned projection, which may possibly have been a leg of this stand (?). Th. 3.3, of the broken-off projection 5.5 mm
13. Brown piece of flint, not retouched

House K 732

K. 13732:

1. Half of (*Wu*)-*shu* coin
2. Small fragn. of copper coin, prob. *Wu-shu*
3. Bronze strap-buckle, consisting of an under-plate with rectangular strap-holder and a large, oval plate with open-work pattern; the latter part is covered with a vaulted front-plate with a dragon ornament in relief and open-work, the two plates being fastened to each other by two rivets, rather carelessly attached at each end. The whole object is a little curved lengthwise. The verdigris

- is reddish brown. No exact counterpart in the collections. Size 6 × 3.6 cm. Fig. 54
4. Bronze under-plate of double strap-mounting, square with rectangular opening near one edge, a rivet-hole at each corner, and oblique edges. 2.8 × 3 cm; Th. 1 mm
5. Pointed bronze rod, fragn. of larger object
6. A few bronze pieces, and refuse from casting
- 7-9. Fragn. of three small melting-pots with roundly pointed bottom, as on Pl. 20: 1. No. 7 has been 4 cm high, with diam. 3.7 cm. The thickness varies greatly between 2 and 5 mm

House K 733 is one of the house ruins, excavated by Wang, which Bergman failed to see on his mapping tour in the dune region. Its position is thus only approximate.

K. 13733:

1. Corroded *K'ai-yüan-t'ung-pao* coin. Diam. 24 mm
2. Corroded copper coin with the square hole widened upwards, *I-ning-yüan-pao*. Diam. 25 mm
3. Fragm. of copper coin, prob. (*Ta*)-*kuan-t'ung-pao* (1107—11). Diam. 25 mm
4. Piece of bronze sheet with several holes along the edge, pierced by a nail
5. Various bronze pieces, sheet and refuse from casting
6. Two frs. of a broad, thick iron ring with a rounded projection about 2 cm long. Possibly fitting for wooden pole. Diam. has been 3.2, Th. c. 0.6, Br. 1.6 cm
7. Fragm. of strap-fitting (?) made of a large shell (Turbo marine). Has probably been rectangular with rounded corners. One end lower and pierced with small round hole; towards the other, higher end there is a rectangular opening. Well smoothed. L. (3) cm
8. Spindle-whorl made of light grey potsherd, much weathered

Tati K 734 is situated between Houses K 733 and K 735 on open ground among dunes, the exact position and extension being unknown.

K. 13734:

1. Nearly triangular mounting, pressed out of bronze sheet, with curved sides and ornament possibly representing a *t'ao-t'ie* mask stamped from inside. Traces of hoops for fastening at each inside corner. Mounting for bottom of knife-sheath? (Cf. K. 13799: 191 which is similar except for the ornamentation)
2. Various bronze pieces, sheet and refuse from casting
3. Small spool-shaped bead of blue glass, made of a spiral thread. L. 13 mm
- 4-5. Two small frs. of blue glass beads
6. Fairly large portion of stoneware dish, "Feather-combed" ware (marble effect). Strongly turned-up rim, and flat bottom on wide, low foot-ring. Transparent, light brownish glaze covers slender pattern of fine, curved, dark brown lines penetrating buff ground-paste. Diam. of mouth has been 17.7, of foot-ring 12.9, H. 3.4 cm. Fig. 62: 5, and Pl. 23: 15
- 7-8. Two small pieces from rim of prob. one stoneware dish, of Ying-ts'ing ware. The rim is lobularly curved

House K 735 lies on a *yardang* between dunes.

K. 13735:

1. Fragm. of copper coin, (*Huo*)-*ts'üan* (14—40 A.D.)
2. Fragm. of copper coin, prob. a *Wu-(shu)*
3. Thin bronze wire, bent into a loop, possibly an ear-pendant. Section is flattened round
4. A few bronze pieces, mainly refuse from casting

House K 736

K. 13736:

1. Copper coin, *Hi-ning-chung-pao* (1068—78), with broad rim and flat back. Diam. 29 mm
2. Fragm. of very large copper coin with a *-pao*
3. Small bronze buckle with oval frame, which is oblique through use, and oblong, narrow plate for fastening to the strap; near the rounded, free end of the latter there is a (rivet?) hole and on the back two rivets near the hole. The tongue is missing. No exact counterpart in the collections. 2.8×2.2 cm. Pl. 33: 26
4. Fragm. of stamped bronze sheet, prob. mounting, which has been rectangular. In the centre a *Yin-yang whorl*. Two small holes caused by damage. Unique. 2×1.8 cm. Pl. 32: 17
5. Bronze ear-pendant consisting of an S-bent wire with round section except at one end, which is flat and pointed. L. 4 cm
- 6-7. Two pieces of bronze bands, bent up. Br. c. 7 mm, Th. 0.5 mm
8. Small round bronze disc with an unsymmetrical hole at centre. On one side there are four low elevations framing the hole. Unique. Diam. 1.8 cm; Th. 4 mm. Pl. 32: 16
9. Small spindle-whorl of bronze, with oval section. Diam. 2.2, Th. 1 cm
10. Spindle-whorl or ornament of lead, one side flat, the other side convex with impressed pattern representing an eight-lobular rosette. Diam. 2.2 cm, Th. 9 mm. Pl. 31: 8

11. Small piece of iron with a rather large rounded hole. Th. varying between 3 and 7 mm
12. Iron ring. Diam 5 cm
13. Oblong iron piece, possibly fragm. of iron arrow-head (?), $5.3 \times 1 \times 1.6$ cm
14. Small square piece of blue-green glass, prob. for finger-ring. 9×10 mm. Pl. 30: 43
15. Nearly half of stoneware bowl, Kün ware, now put together from several small pieces. Light greenish glaze of uniform shade all over, even the rim (which is mostly more or less brownish). Diam. has been 20.7, H. 9.5 cm. Fig. 64: 6
- 16-17. Two small pieces of Kün bowls with blue-green and grey-green glaze respectively
18. Two pieces, matching each other, from rim of small stoneware cup. Ting ware of high quality, with transparent glaze
19. Small piece of the same kind as no. 18 but of somewhat poorer quality, of Ting ware
20. Small earthenware cup on high, narrow foot, of light grey paste. Diam. of mouth 6.6, of base 3.6, H. 4 cm. Pl. 20: 3
- 21-23. Two complete and one half spindle-whorl made of potsherds
24. Fragm. of spool-shaped earthenware net-sinker of A-type. L. 6 cm
25. Small yellow-brown piece of flint

Houses 45 consist of a rather large house ruin with three rooms, built of "block" bricks and another smaller house ruin about 250 m N 30° W.

Houses K 737 consist of two or three house ruins, built of "block" bricks.

K. 13737:

1. Triangular bronze arrow-head of the common Han type, with straight corners; small triangular impression on one side, and a small lump of verdigris indicating the once bronze tang. L. 29, W. of sides 9 mm
2. Round bronze mounting with two large rivets on the back. The top side is vaulted and ornamented;

the edge consists of 15 small, concave circles with some traces of whitish substance (remains of cement for holding e.g. glass pieces ?), at one place substituted by a notch; the middle part, which is made in two levels, is decorated with simple incisions, and the central top part is crowned with a diagonal row of three "bumps". Diam. 2.8 cm; Th. of material c. 2 mm. Pl. 34: 11

Houses 46 consist of two ruins, one of which has only one wall made of "block" bricks left.

House 47 and *House 48* are built of "block" bricks, the former being a small building.

House P 4 consists of insignificant remains, excavated by Bergman himself while on a route.

P. 197:

1. Wooden object, symmetrically carved. Rather well smoothed, slightly vaulted sides, one edge somewhat convex, the opposite edge angular with a deep notch at the middle, from which point the edge slants concavely towards the nearly pointed ends. (Cf.

I.A., Pl. XVI, N.XLV.1.05.)

$11.4 \times 2.7 \times 1.5$ cm. Fig. 19: 18

2. Fragm. of *Si-Hia* print. Height of the page has been about 20 cm. Across the text a border of seated Buddhas with worshippers

Houses P 5 consist of at least two house ruins, built of "block" bricks and excavated by Bergman.

P. 297:

1. Spindle-whorl made of potsherd with reddish purple, hard ware. Well made. Diam. 3.5, Th. 1.3 cm

2. Ditto, somewhat weathered, made of grey potsherd. Diam. 2.9, Th. 0.7 cm

3. Copper coin, *Hi-ning-yüan-pao* (1068—78), with broad rim (Br. 3 mm at front and 5 mm at back). Diam. 3.05 cm

House K 738 stands on a 1 m high *yardang*.

K. 13738:

1. Bent-up bronze band, possibly simple finger-ring, with two shallow, parallel grooves around. Br. 4.5, Th. 0.3 mm

2. Fragm. of stamped bronze sheet with simple geometrical ornaments. The preserved piece consists of the triangular corner of a larger

- plate. No counterpart in the coll., but similar to Pl. 32: 17 in technique
3. Four small bronze pieces
 4. Spherical bead of weathered white vitreous stone. Identical with the grave-finds K. 13768: 11—19. Diam. 11 mm
 5. Small spherical bead of white untransparent glass
 6. Small bead, ring-shaped, of blue glass. Diam. 5 mm
 7. Spindle-whorl of light grey potsherd with nine shallow pits around the central hole on one side. Unique. Diam. 3 cm. Pl. 23: 9
 - 8-9. Two spindle-whorls made of potsherds

Houses 49 consist of four or five adjacent ruins, almost totally decayed, constituting the south-easternmost ruins of Erego-khara-burukh, and situated near the dried-up rivulet stretching towards the salt lake.

House 50 starts the third consecutive row on the map, being situated east of Tsondolin-tsaghan and south of House 36. A rivulet has probably flowed about 100 m to the east. Its size is 13 × 17 m, its height being about one m. The walls are made of bricks, prob. of medium size. The direction of the longer sides is N 52° W, and a door or entrance is seen in the west short-side.

House K 739 consists of a rather low mound of gravel, covering the original house, which is rather small.

K. 13739:

1. Fragm. of iron barrel-shaped lock with nearly square openings at each short-side, matching each other. There is besides a small round hole at one short-side and a deep, narrow notch at the other side. L. 4.5, diam. at the middle c. 4, at the ends 3 cm. Fig. 55, and Pl. 38: 19
2. Two small melting-lumps of bronze
3. Spherical bead of cornelian or agate
- 4-10. Seven spindle-whorls made of potsherds
11. Spindle-whorl made of grey potsherd with un-



Fig. 55. Iron barrel of a padlock, viewed from three sides. K. 13739: 1, Pl. 38: 19. Half size.

- finished central hole, the boring begun from both sides alike
12. Rounded potsherd, light grey ware with coarse cord-impressions
13. Fragm. of whetstone of red slate
14. Piece of olive-green stoneware vessel, Northern celadon ware, with designs in very low relief on the outside, where the glaze ends above the foot-ring
15. Four pieces matching each other of an exquisite stoneware bowl, Kün ware, with unusually thick, light green glaze which has some purple spots on the inside. Diam. of base 6.8, of mouth 20, H. 8.6 cm. Fig. 64: 2
- 16-64. 49 pieces of Kün bowls, probably from 12 or 13 separate ones. Several of the pieces are from the rim. The glaze varies between green and red shades, and is in some instances very thick. The body is dark grey, or light grey or buff, often changing to red towards the base

House K 740 consists of insignificant remains of a small house, built of "block" bricks. Bergman seems to have excavated it himself.

K. 13740:

1. Fragm. of rosette-shaped, five-lobular bead of blue glass
2. Half of spherical bead of yellowish brown glass. Diam. 13 mm
- 3-8. Six pieces of stoneware cups, celadon ware, some of which have incised designs
9. Two pieces, matching each other, of stoneware bowl, Kün ware, with pale green glaze, which has on inside a large purple spot
10. Fragm. of celadon bowl, the body rather thick
11. Fragm. of high, massive stand of celadon cup
12. Two pieces from top part of small stoneware vase, Northern celadon ware, which has had

- at least one handle. Glaze does not cover the whole of the interior. On shoulder part, floral pattern in very low relief. Unique in shape. Pl. 25:3
- 13-15. Three small pieces of possibly the same vase as no. 12
16. Small piece of stoneware vessel, Ts'i-chou ware, with transparent glaze covering dark brown underglaze painted designs on the outside, and dark brown glaze on the inside
17. Piece of Ts'i-chou vessel with thick, brown glaze and sgraffito ornaments
18. Piece from rim of stoneware bowl with dark brown glaze on buff body
19. Round potsherd with "combed" festoons and horizontal bands. Brown-grey body

House K 741 is situated on a *yardang*. A collapsed quern-stone was found near to it. Among the objects excavated by Bergman was also a flint core, now lost.

- K. 13741: 1-3. Three pieces from prob. the same stoneware bowl, Kün ware, with green-blue glaze turned into brown at the rim
4. Fragm. of bottom of stoneware bowl, celadon ware, probably of the Ming dynasty, which has unusually thick wall. Very thin pale green glaze on light grey body. Centred inside, a stamped floral pattern. Pl. 25:7

House 51 consists of very insignificant remains, and lies on three small *yardangs*. A few quern-stones were seen around.

House 52 — see Fig. 44 for plan.

House 53 is very insignificant and built of "block" bricks. Some finds seem to have been made, but were probably left at the site.

Tati P 6 was never visited by Bergman, the collection being made by Wang. It is situated near to and west of the NNE branch of the Etsina River, in the middle of Erego-khara-burukh.

- P. 296: 1. Fragm. of *Wu-(shu)* coin
2. Triangular bronze arrow-head of the common Han type with straight corners. L. 30, W. of sides 10 mm

House K 742 was only visited by Chin, who excavated a supposed large collection of finds from different periods, possibly partly taken from the neighbouring *tati* K 743, which was also explored by Chin at the same time.

K. 13742:

1. Strongly corroded *Wu-shu* coin. Diam. 25 mm
2. *Wu-shu* coin with short, raised horizontal line on front below square hole. Diam. 25 mm
3. Copper coin, *Süan-ho-t'ung-pao* (1119—26). Diam. 27 mm
4. Half of large, strongly corroded copper coin, *K'ing-yüan-(t'ung-pao)* (1195—1201). Diam. c. 35 mm
5. Fragm. of copper coin, *Yüan-?-(t'ung)-pao* with broad rim
6. Fragm. of copper coin with three illegible characters. Diam. 25 mm
- 7-11. Five small frs. of coins, some of which may be Han coins
12. Large triangular bronze arrow-head of the common Han type, with barbs, triangular depression on each side, and traces of iron tang. L. 41, W. of sides 11 mm
13. Small ditto, rather weathered and with blunt point. The corners are rounded straight, and the tang seems to have been of bronze. L. 24, W. of sides 10 mm
14. Small round bronze scoop with conical profile and with a short, straight handle of triangular section projecting from the rim. The handle is attached by means of a piece of bronze plate to the wall of the bowl. Unique. Diam. of mouth 3.4, of flat base 2, H. 1.6 cm; Th. of material 1—1.3 mm. Fig. 56, and Pl. 33:24
- 15-16. Two similar bronze hair-pins, found lying side by side, and possibly once forming a U-shaped hair-pin. They consist of straight, flat wires



Fig. 56. Small bronze scoop, K. 13742: 14 (Pl. 33: 24).
The handle is probably broken off. Nat. size.

with profiled, bent heads.

L. 11 and 9.6 cm. Pl. 35: 18

17. Bronze knob of ear-pendant, gourd-shaped as on Pl. 35: 5
18. Cross-shaped bronze mounting, the long arm at one end divided into two and ending in rosette-shaped plates with central hole. One of the rosettes is missing. Front ridged, back flat. L. 6.5 cm. Pl. 32: 6
19. Round, slightly vaulted bronze plate with two small holes near the edge for sewing or rivets. Unique. Diam. 2.6 cm; Th. 1.8 mm
- 20-21. Two small bent-up bronze bands
22. Various bronze pieces and refuse from casting

23. Rectangular iron ring with broad side, consisting of a bar forged together at one corner. Size c. 2.4×3.2 , Br. c. 1.1 cm. Th. about 4 mm
24. Small unsymmetrical iron cylinder, consisting of an unevenly thick piece bent up
25. Fragm. of oval-sectioned iron cylinder (lock ?) with drawn-in bottom, which has at centre a square hole. Cast in one piece, the material being of poor quality. About 2.7×1.8 cm
26. Iron piece. $3.5 \times 1.7 - 1.3 \times 0.8$ cm
27. Spool-shaped hexagonal bead of weathered white stone or glass, identical with grave-find K. 13768: 9
28. Fragm. of spool-shaped bead of blue glass
29. Five-lobular rosette-shaped bead of blue glass
30. Fragm. of ring-shaped bead of blue glass with some deep grooves parallel to the hole (spherical rosette). Pl. 30: 11
31. Half of ring-shaped bead of blue glass
32. Half of ditto of brown glass with polished broken-off surfaces
- 33-39. Seven spindle-whorls made of potsherds. Diam. 4.3—3.3 cm
40. Half of spindle-whorl made of light grey potsherd
41. Fragm. of unusually thick spindle-whorl of limestone. Diam. c. 3.5, Th. 2 cm

Tati K 743 yielded finds from different periods to the excavator Chin, who visited the place alone.

K. 13743:

- 1-9. Nine *Wu-shu* coins. Diam. 26—23 mm
- 10-12. Three frs. prob. of *Wu-shu* coins
13. Triangular bronze arrow-head of the common Han type, with straight corners and traces of an iron tang. L. 31, W. of sides 10 mm
14. Bronze arrow-head, differing from the previous type in that the core is round between the three edges, which thus look like flat, raised rims of the sides. The base is of rounded triangular section, although attempts at the usual hexagonal form have been made. Clear traces of bronze tang. L. 32, W. of sides 11 mm. Pl. 33: 3
15. Small, nearly half-round, bronze plate with stamped *t'ao-t'ie* mask probably representing a tiger's face. A straight, narrowing projection perpendicular to the straight top edge. No traces of rivets; possibly cover of tin, the projection once ending at a hinge (?). Unique. Pl. 32: 12
- 16-17. Two identical bronze mountings in the shape of *t'ao-t'ie* masks, with broken-off lower edge. On the back a flat horizontal projection pierced with a hole for attaching. Slightly vaulted. 4.7×3.7 cm. Fig. 57, and Pl. 32: 15

- 18-19. Two identical bronze rings with round section, found together. (They could possibly have been attached to the [now broken-off] lower part of masks nos. 16—17.) Outer diam. 3.6 cm, Th. 4—4.5 mm

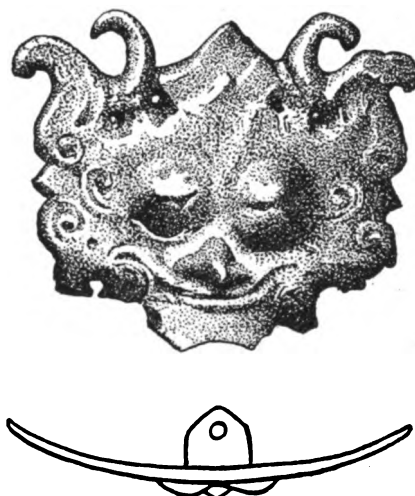


Fig. 57. Bronze mounting in the shape of an ogre mask, K. 13743: 16 (one of a pair, cf. Pl. 32: 15).
Dark brown verdigris. Nat. size.

20. Fragm. of small, cylindrical end-fitting of lead with three ridges around the outside. Traces of casting. Unique, but there are similar specimens of bronze below, nos. 21—23. Max. Th. of wall 0.5 mm. Diam. 12—13 mm
- 21-23. Three short, cylindrical bronze fittings, narrowing towards the closed end. About 0.5 cm from the latter there is a cast, rather sharp ridge around on the outside. L. (1.7)—(1.3), Diam. c. 0.9—1 cm; Th. of wall 0.3 mm. Pl. 36:8
- 24-32. Nine complete or fragmentary small bronze tubes with knob and hook, which are end-fittings for canopy ribs. L. of complete specimens 2.6, Diam. 0.7 cm. Pl. 36:7
33. Bronze bar with square section, the ends bent at obtuse angle in the same direction. L. 8.3 cm. Pl. 38:15
34. Fragm. of ditto
- 35-36. Two frs. of bronze pins, with widened, flat parts
37. Fragm. of rather large bronze tube with sharp ridge around, of the same type as the small tubes nos. 21—23 above. L. (4), Diam. 1.5 cm; Th. 0.6 mm. Pl. 36:6
38. Fragm. of ditto, prob. the same tube
39. Fragm. of half-spherical, ring-shaped object of bronze plate, possibly shoeing of rounded wooden disc (?) of slightly uneven diameter
40. Largish parabolic bronze handle of kettle; consists of a rectangular-sectioned bar with bent-up ends. Width between the ends 18, H. 13.5 cm, Th. 5.5 × 8 mm. Pl. 36:12
41. Oval-sectioned socket of bronze sheet, fragmentary, probably end-fitting of sword-sheath. Rim of the opening strengthened by flat bronze ring, over which the edge has been bent. The opposite end, which is partly missing has prob. been rounded. Traces of black lacquer. Unique in the collections, although some sheet pieces may be fragm. of similar objects. (9) × 5.8 × 4.5 cm, L. orig. c. 9.5 cm; Th. of sheet c. 0.2 mm, of bronze band 1.5 to 1 mm. Pl. 37:14
42. Various bronze pieces, mainly refuse from casting
43. Fragm. of socketed iron adze- or hoe-blade, weathered and with rust lumps. Rectangular section of socket, the narrow-sides tapering a little towards the cutting-edge, which is missing. The latter has been broadened by a flat projection on each narrow-side of socket, and above these ridges of casting. L. (11.4), reconstr. L. 11.6, base of socket 5.9 × 2.8, Br. including the projecting parts c. 10 cm; Th. of material 4 mm. Fig. 48
44. Fragm. of small flat ring-shaped bead of white porcelain (?)
45. Nearly complete cup on high stand, of porcelainous stoneware. Thin white-grey to pale reddish purple glaze. Diam. of mouth 10.2, of foot 3.7, H. 6.9 cm. Fig. 60:3, and Pl. 26:3
46. Piece from rim of brick-red stoneware dish with bright yellow and green enamel glazes; probably Ming *san-ts'ai* ware. The rim is curved and the bottom has leaf-ornaments in low relief on inside. Pl. 20:20
- 47-50. Four spool-shaped earthenware net-sinkers of A-type. L. 5.3—3.7, Diam. 2.3—1.4 cm

House K 744 is built of "block" bricks with the longer walls knocked down by a fallen tree, and is situated at the edge of a cone on bare ground. The collection was gathered by Bergman who observed quern-stones around.

K. 13744:

1. Four pieces of iron with bronze verdigris attached
2. Part of bottom of stoneware bowl, celadon ware, prob. of Ming period, with pale olive-green glaze on light grey body. Centred inside, stamped floral spray, on outside encircled centre within low foot-ring. Pl. 25:9
- 3-4. Two pieces of celadon bowls
5. Pieces from side of concave socle of celadon vessel, the rim foliate and prob. extended into three short legs. Light greyish white body. Pl. 25:15
6. Small piece of vessel of celadon ware
- 7-10. Four small pieces from rim of at least two rather small stoneware bowls, Kün ware. Grey-blue to grey-brown glazes on buff body

Houses 54 consist of a group of five or six small house ruins together with another one about 150 m to N 25° E. The remaining walls are low except in one ruin, where they reach a height of more than 2 m, its size being 7 × 7 m. They are all built of burnt bricks. *Burukh* and sand now cover most of what were once fields. Two quern-stones and one threshing-stone roller were seen close to the ruins, as also pieces of glazed ware and porcelain, of which nothing was collected. These ruins start the fourth consecutive row on the map.

House K 745 is a long, narrow building made of "block" bricks, its size being 4×15 m. Close to this building there is another one, not marked by Bergman on his route map.

K. 13745. Fragm. of bronze ornament, now consisting of a row of 3 small flat discs with slanting edges. A rivet on back of one of the discs. Clear traces of breaks indicate that the fragm. derives from bend of larger ornament. Diam. of each disc c. 8, Th. 3 mm. Pl. 32: 19

House 55 consists of two rooms, the walls being made of "block" bricks.

House K 746 consists of the ground-floor of a house measuring 5×6 m. Very close to this house, excavated by Wang, there is another one of the same type, and a third ruin which was not visited by Bergman, lying 150 m WNW of the first two ruins mentioned.

K. 13746:

1. Part of rather large stoneware vessel, Ts'i-chou ware, broken in several pieces; probably *mei-p'ing* shape, as the wall has been nearly straight vertically with its shoulder at an obtuse angle. The inside has brown glaze, the outside thin, light brown glaze covering unusually rough,

stiff sgraffito designs: near the shoulder is a row of four-lobular rosettes within square frames. Uncommonly thin, brittle, buff body. Diam. has been c. 18—19 cm. Pl. 22: 15

2. Three pieces, matching each other; lower part of shoulder of the preceding vessel no. 1
- 3-13. Eleven smaller pieces from vessel no. 1

House 56 is built of bricks of medium size on a 2 m high *yardang*, situated between cones.

House 57 is built of "block" bricks. According to the map text Wang made some finds, which, however, must later have been left at the site.

Fortress K 747 is given no description except a plan, showing a square with 11 m long sides.

K. 13747:

1. Triangular bronze arrow-head of the common Han type, with the point a little blunt, with straight corners and a 16 mm deep tang-hole. L. 28, W. of sides 9 mm
2. Bronze band or bar, bent at one end. L. 6, Br. 5, Th. 2 mm
3. Small, triangular fragm. of light green, trans-

parent glass plate, prob. from wall of vessel. $24 \times 7 \times 3$ mm

4. Piece from stoneware vessel, Ts'i-chou ware, with transparent glaze covering painted brown designs. The inside is glazed in brown
- 5-6. Two small grey potsherds with impressed pattern of lozenges covering surface
- 7-8. Two fragmentary spindle-whorls made of brown-grey potsherds, no. 7 with cord-impressions

Tati K 748

K. 13748:

1. Well-preserved *Wu-shu* coin with short, horizontal line raised below square hole on the front. Diam. 25 mm
2. Triangular bronze arrow-head of the common Han type, with straight corners and a rather large lump of rust indicating a once iron tang.

L. 30, W. of sides 10 mm

3. Top plate of D-shaped double bronze mounting for strap. Rectangular strap-hole, and three rivets on the back. 3.1×1.9 cm. Pl. 34: 5
4. Small spherical cornelian bead
5. Rounded potsherd with crossing cord-impressions. Surfaces grey, the interior reddish

Walled Enclosure K 749

This site, whose name Dzun-khure ("The eastern enclosure") is regarded by the Torguts as a pendant to Barun-khure ("The western enclosure", more often called Adune-khure = our ruin K 789), is one of the largest strongholds in Erego-khara-burukh, though there remain only two walls, the northern and the eastern ones, of what originally may have been a square enclosure. The

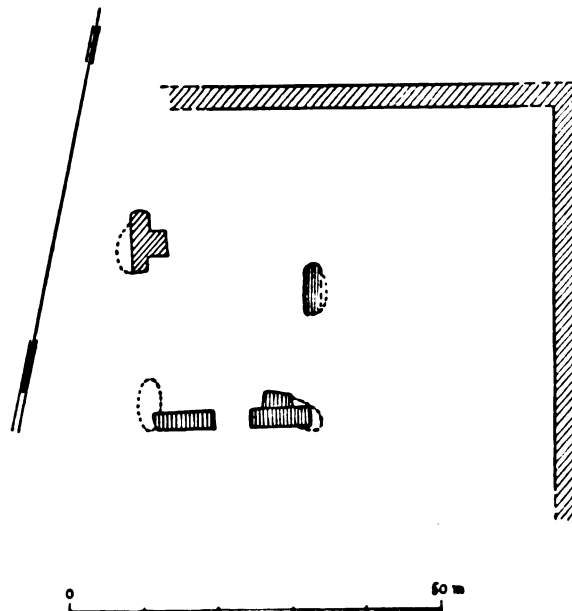


Fig. 58. Plan of Walled Enclosure K 749 (Dzun-khure).
Hatching = stamped clay, vertical lines = brick masonry.

longest wall measures 51 m, but is incomplete. The walls are built of stamped clay and rise to a height of 5.7 m. Inside this open wall-angle there are three isolated remnants of walls reaching the same height as the outer walls, one made of stamped clay and the two others of bricks. They may have formed an inner square as at Adune-khure, but too little of these walls is preserved to allow of any definite conclusion on this point. The plan is shown in Fig. 58.

Drift-sand has accumulated along the walls, but otherwise there is no debris. A trial excavation gave no result, and the objects from this place were collected on the ground, partly from the immediate surroundings. The nature of the objects seems to indicate a rather early age of settlement, as there are no coins other than *Wu-shus* and no glazed potsherds. The most interesting object is likely to be no. 16, Pl. 30:49, found outside the enclosure; it is probably a woman's ear-ornament to be pierced through the lobe, and is almost identical with a find from a Han grave at Lo-yang (White 1934, Pl. CLXV, 451 b). It is made of blue-green glass and consists of a short biconcave, round-sectioned pin with a rounded, rather large knob at one end and a point at the other end.

K. 13749:

1. Small piece of bronze plate, Th. 0.5 mm; prob. from a vessel
2. Half of spherical bead of cornelian or agate. Diam. 13 mm
3. Segment of round, vaulted disc (?) of mussel-shell (*Quadrula*): from spindle-whorl? Diam. of the presumed disc 4.2 cm, of which about one third is left. Even thickness, 3 mm
4. Fragm. of earthenware vessel decorated with "combed" festoon design between "combed" annular bands. Light brownish grey, homogeneous paste
5. Fragm. of earthenware vessel with crossing cord-impressions upon which is a pattern of "combed" festoons within small fields made up by annular scorings and short, vertical lines. Back strongly wind-ground. Light grey, homogeneous paste with light brown outer surface, which is rather glossy, probably from action of sand
6. Small fragm. of unglazed earthenware vessel with traces of at least two parallel "combed" festoons around. Blue-grey, homogeneous paste with dark brown, rather glossy outside and broken-off edges; hardness Mohs 6.0

7. Fragm. of earthenware vessel, cord-marked. Blue-grey, homogeneous paste; hardness Mohs 5.0
8. Ditto, with finer cord-impressions than no. 7. Paste grey, turning into brownish grey towards inside surface; surfaces and broken-off edges dark grey
9. Fragm. of rough, unglazed stoneware vessel, with foliate outside. Dark grey, homogeneous paste with glossy surfaces, tempered with sand; hardness Mohs 7.0
10. Ditto with foliate outside. Blue-grey, homogeneous paste with dark greyish brown, glossy surfaces; hardness Mohs 7.0
11. Sherd with foliate outside, and horizontally everted rim. Light grey, homogeneous paste with light brown, glossy surfaces; hardness Mohs 5.5
12. Piece from everted rim of fairly large, rough unglazed earthenware vessel; annular scorings. Dark grey, homogeneous paste with glossy surfaces; hardness Mohs 6.5

The following specimens were found outside the walls:

13. Fragm. of *Wu-shu* coin
14. Fragm. of copper coin, prob. *Wu-shu*
15. Small piece from rim of simple bronze vessel. Th. 1—2 mm
16. Ear-lobe ornament of blue-green glass, Han type (see text above), consisting of a biconical, round-sectioned middle part with rounded, rather large knob at one end and with the other end pointed. Exquisitely made; unique. L. 19 mm. Pl. 30:49
17. Spool-shaped earthenware net-sinker of A-type. L. 5.2, Diam. 2.2 cm

House K 750 is built of "block" bricks.

K. 13750:

1. Point of iron knife, Br. 2 cm, Th. 3.5 mm
2. A few pieces of bronze sheet
3. Large piece from side of rather small earthenware vessel, with portion of flat handle attached at widest part of belly. Small, carelessly "combed" festoon borders around. Base of handle oval and

with stamped design representing stylized human figure; actual handle part narrow, flat and slightly curved, its shape possibly indicating that it has been holding a (fictitious) ring. Blue-grey, homogeneous, well levigated paste with brownish, partly glossy surfaces and edges. Gr. M. 12 cm. Pl. 19:14

House 58 has decayed into a mound of burnt bricks.

Tati K 751 was never visited by Bergman, and its extension is therefore unclear.

K. 13751:

1. Fragm. of *Wu-shu* coin
2. Copper coin broken into four pieces, prob. *Wu-shu*
3. Small corroded fragm. of copper coin
4. Triangular bronze arrow-head of the common Han type, much decayed and weathered, with straight corners and traces of a bronze tang. L. (26), reconstr. L. 29, W. of sides 10 mm
- 5-6. Two pieces of bronze sheet with (rivet) holes, of larger objects
- 7-8. Two halves of spherical beads of white and yellowish brown glass

9. Fragm. of spool-shaped earthenware net-sinker of A-type. Diam. 2.3 cm

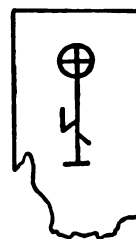


Fig. 59. Building brick with impressed sign from Stupa 59. Scale about 1/10.

Stupa (?) 59 consists of a circular pavement of burnt bricks, one of which is shown in Fig. 59.

House K 752 is now a small remnant with 2 m high walls of stamped clay, situated on clay ground near a gravel area. Length about 5 m. Bergman observed "K. K. pottery" in this locality when mapping, but nothing of this kind was collected by Wang, who visited the place a few days later.

K. 13752:

1. Triangular bronze arrow-head, differing from the common type in that the edges change successively into the base, which is round and rather long. A triangular depression in one side. Traces of iron tang. L. 38, W. of sides 8 mm. Pl. 33: 2
2. Triangular bronze arrow-head of the common Han type, with very small barbs and one small

triangular depression on each side. The point is a little blunt. L. 32, W. of sides 10 mm

3. Finger-ring consisting of a bent-up bronze wire, one end rather thick, the other end thin and formed into a loop
4. Small piece of iron, much weathered, possibly fragm. of iron lanceolate arrow-head ?
(3.7) × 0.8 × 1 cm

Tatis K 753 were probably not visited by Bergman, only by Chin; the extension of this group of *tatis* is unsure.

K. 13753:

1. Copper coin, *Yüan-feng-t'ung-pao* (1078—86), with strong desert verdigris, almost resembling iron. Diam. 24 mm
2. Round bronze ornament for strap with ring-shaped under-plate for attaching. The edges of the top-plate are lobular and centred on the front is a raised circle, which may have held some inlaid substance, as indicated by the central rivet-hole. Traces of joining between the top- and the back-plates. No counterpart in the collections. Diam. 2.8, H. 0.8 cm; Th. of material about 2 mm. Fig. 9: 4, and Pl. 34: 14
3. Bronze pin bent at nearly right angles, with one

- end pointed and the other possibly formed into a bowl, which is broken off. Diam. c. 2.5 mm
4. Small, nearly triangular piece of bronze sheet with a small round hole in each corner
 5. Two pieces of bronze, probably refuse from casting
 6. Biconical, hexagonal bead of cornelian. Diam. 12 mm. Pl. 30: 33
 7. Fragm. of the rather low foot of a stoneware cup, Ting ware. Discoloured, yellowish glaze which does not cover the whole of the foot. H. 2 cm
 8. Earthenware net-sinker of B-type, with longitudinal and crossing grooves

Stupa 60 opens the next or fifth consecutive row on the map.

House 61 is built of bricks, its size being 3.5 × 9 m. It is situated on clay ground.

House K 754 was first characterized by Bergman in these words: "*yardang* resembling a ruin", but as two threshing-stone rollers and many pieces of quern-stones were seen lying around, Bergman changed his opinion: "so perhaps it is really a ruin", and asked Wang to undertake an excavation.

K. 13754:

1. Round bronze seal-stamp, unsymmetrically five-lobular and with five unsymmetrical fields made up by raised portion walls; a thick pin is bent into a loop on the back. Diam. 2.5 cm. Pl. 32: 26

2. Two pieces of bronze sheet and one lump of casting
3. Half of spherical "bead" of blue-green soft stoneware, with deep vertical grooves. Diam. 1.6 cm. Pl. 23: 10

Tati K 755

K. 13755:

1. Fragm. of (*Wu*)-*shu* coin
2. Fragm. of copper coin, either *Kia-ting*-(1208—24) or *Shao-ting*-(1228—33)-*t'ung*-(*pao*)
3. Small fragm. of copper coin

4. Copper coin, *Hi-ning-yüan-pao* (1068—78). Diam. 25 mm
5. Two iron coins attached to each other by rust. Diam. about 27 mm
6. Unsymmetrical bronze pellet. Diam. 15 mm
7. Four pieces of bronze

House K 756 is "very small" in size.

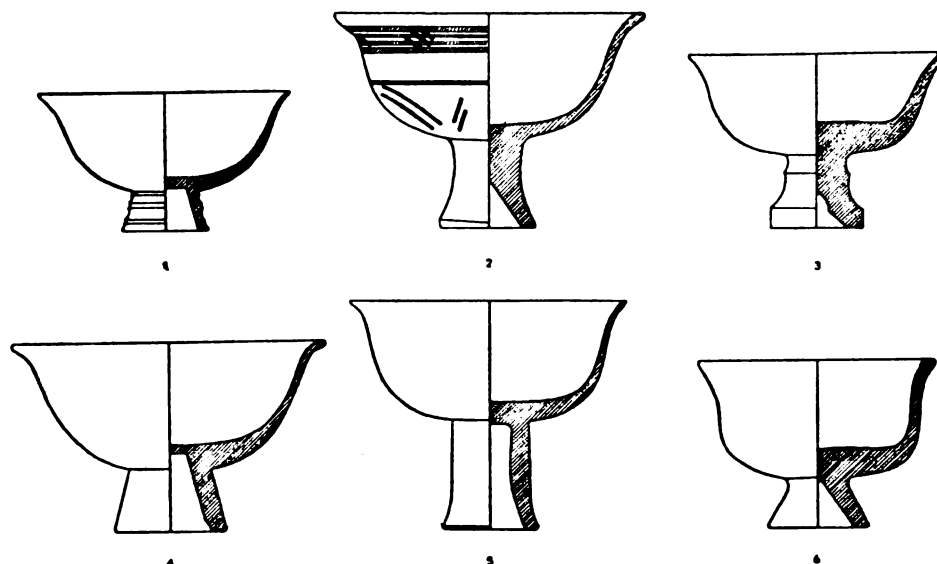


Fig. 60. Stem cups. Celadon (2), Ying-ts'ing (5), Ting (1), t'u Ting-like stoneware (3), Ts'i-chou (4, 6). Scale 1/3. 1. K. 13766: 12, 2. K. 13769: 23, 3. K. 13743: 45, 4. K. 13799: 199, 5. K. 13799: 34, 6. K. 13769: 24.

K. 13756:

1. Three pieces from upper part of large bronze pan with slightly marked neck. The pieces belong to each other. Th. very varying, between 1.5 and 2 mm
2. Rectangular piece of bronze sheet, probably end-mounting for strap, bent up double with the ends held together by two rivets. 3×1.4 cm, distance between sides c. 2 mm
3. Small U-bent iron rod
4. Small piece of iron, possibly intended as rim of vessel, refuse from casting
- 5-9. Five small pieces from three or four stoneware bowls, Kün ware, with glazes in green and green-blue shades
10. Neck of stoneware jar with brown-green glaze on buff body. Diam. 4.6. H. 2.4 cm
- 11-15. Five pieces of rather thin-walled stoneware bowls with black-brown or light brown glazes
- 16-17. Two pieces of stoneware vessel. Ts'i-chou ware, with dark brown glaze and carelessly made sgraffito decoration
18. Piece of fairly large vessel, Ts'i-chou ware, with light yellow, transparent glaze covering dark brown painted designs on the outside. On inside dark brown glaze and a border of tool marks consisting of small, deeply impressed squares
19. Small piece of Ts'i-chou vase with almost totally worn glaze with blue-green enamel spots remaining on the outside, between plant-ornaments painted in dark brown. On inside thin yellowish glaze on buff body
20. Small piece of Ts'i-chou vessel with transparent greenish glaze covering dark brown painted designs on the outside. On inside chocolate-brown glaze and tool marks consisting of small, stamped lozenges
21. Small piece of stoneware vessel, with green glaze and a lotus flower in relief on outside
22. Small fragm. of blue-glazed stoneware vessel or tile
23. Small rounded earthenware potsherd
- 24-25. Two wind-ground spindle-whorls made of potsherds
26. Half of spindle-whorl of red slate
27. Ditto of blue limestone
28. Rectangular knife or scraper of slate with round hole at middle. Without real cutting-edge. L. 9.4. Br. 4.5 cm; Th. 5—8 mm. Pl. 20: 13
29. Fragm. of rectangular whetstone of green slate with suspension-hole
30. Piece of flint

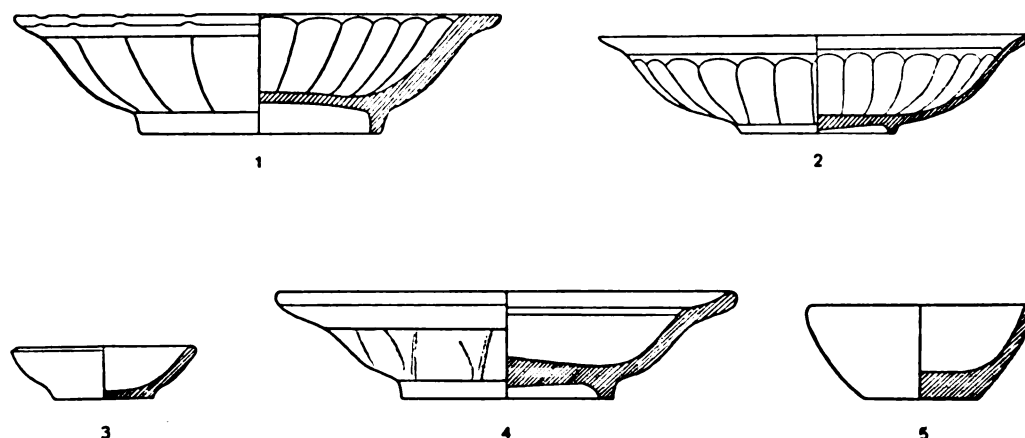


Fig. 61. Small saucers and bowls. Celadon (1, 4), Ying-ts'ing (2, 3), glazed, porcellaneous stoneware (5). Scale 1/2. 1. K. 13769: 21, 2. K. 13779: 42, 3. K. 13728: 8, 4. K. 13769: 22, 5. K. 13791: 18.

Tati K 757

K. 13757:

1. Copper coin, *Hi-ning-yüan-pao* (1068—78). Diam. 24 mm
2. Copper coin of rather poor quality, *Chi-tao-yüan-pao* (995—98). Diam. 23 mm
3. Fragm. of large copper coin, *Ch'ung-ning-(chung)-pao* (1102—07). Diam. 35 mm
4. Strongly corroded iron coin with square hole. Diam. c. 30 mm
5. Stamped top-plate of bronze end-mounting for strap, rectangular with one end pointed-round. On each side of a longitudinal groove along the middle there is a row of impressed symbols resembling letters. A bronze rivet near each end at the back. Unique. $3.5 \times 1.6 \times 0.35$ —0.5 cm; Th. of material 1—1.5 mm. Pl. 31: 4
6. Square strap-holder of doubly bent bronze sheet for buckle with tongue, which has passed through a rectangular notch in the bent-up edge. The other end is held together by two rather thick bronze rivets. 2.3×2.4 cm. Pl. 34: 9
7. Two strongly corroded pieces of bronze sewing-ring, of a type as on Pl. 35: 12. Diam. 2. Br. 1 cm; Th. of material 1 mm
8. Short piece of bent-up bronze wire. Th. 1 to 1.25 mm
9. A few pieces of bronze
10. Nearly oval plate of mother-of-pearl from shell of a fresh-water mussel (*Anodonta*), with hole for suspension near one end. 2×1.5 cm. Pl. 30: 47
11. Piece of coral
12. Square-sectioned, straight bead of green glass. $9 \times 5 \times 5$ mm
13. Biconical and hexagonal bead of cornelian
14. Spherical bead of cornelian. Diam. 7 mm
15. Biconical bead of cornelian. Diam. 10 mm
16. Small spherical bead of green glass
17. Half of spherical bead of yellow glass. Diam. 11 mm
18. Well-ground pellet of cornelian. Diam. 17 mm
19. Pieces of chalcedony

House 62 consists of two rooms, 5×5 m and 3×5 m, respectively.

House K 758 with tati. The identification of this house is somewhat uncertain, and Bergman has made some mistakes here. Firstly, he put the finds from a *tati* between this insignificant remnant and House K 756 together with the finds from this very house, although they are distinctly separated in his note-book of finds. Secondly, he marked it out on his corrected map as situated south of House K 756 instead of NE of it, as he notes on his field map. This must have caused this collection to be characterized by its finds from different periods: it seems, however, as if the older elements derive from the *tati*, and the late ones from the house ruin. The excavations were carried out by Wang.

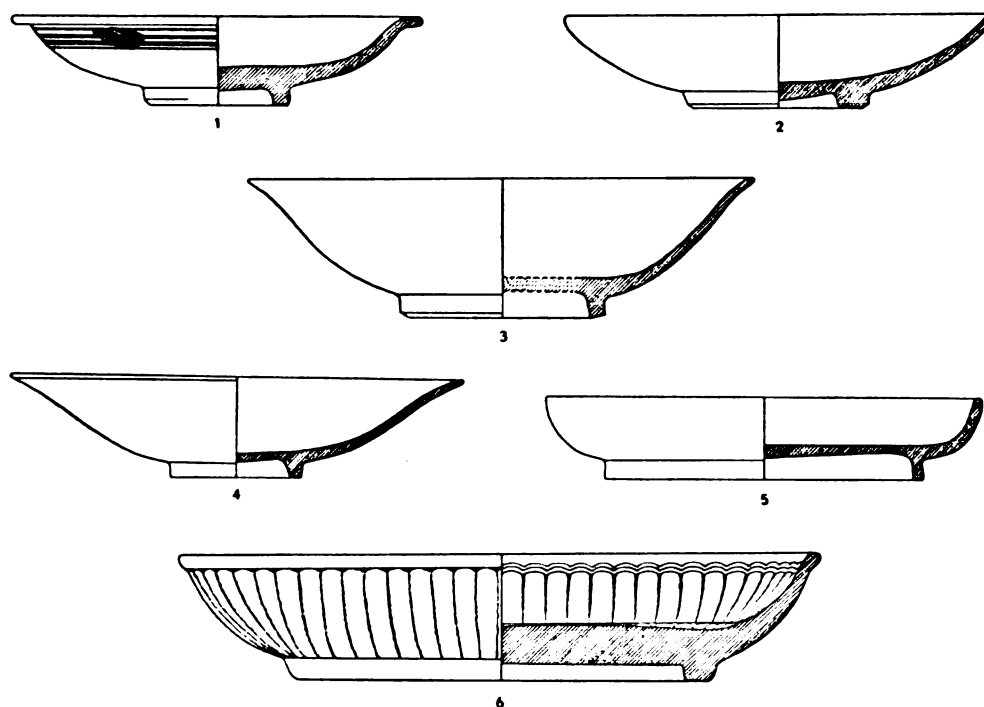


Fig. 62. Saucers and low bowls. Celadon (1, 4, 6), marbled ware (5), t'u Ting of Kü-lu types (2, 3). Scale 1/3. 1. K. 13759: 25, 2. K. 13724: 21, 3. K. 13800: 24, 4. K. 13800: 21, 5. K. 13734: 6, 6. K. 13765: 24.

K. 13758:

1. Fragn. of *Wu-shu* coin
2. Copper coin, broken in two, *T'ien-hi-t'ung-pao* (1017—22). Diam. 25 mm
3. Fragn. of copper coin, possibly a *Ch'ung-(ning-t'ung-pao)* (1102—07)
4. Fragn. of copper coin with a *Sung-* at the top
- 5-6. Two frs. of copper coins, both with a *-pao* as the last character of a legend
7. Fragn. of bronze mounting (of knife-sheath?) with indistinct relief ornaments, possibly a wreath. Consists of a rather thick, slightly vaulted bronze plate, rectangular with one end bent at right angles. Br. 1.9 cm
- 8-10. Three bronze pins bent up to form open finger-rings, no. 8 being made of a narrow band cut out of bronze sheet. Pl. 35: 14
11. A few bronze pieces
12. Larger part of iron knife-blade. L. (12.5). Br. 1.8 cm; Th. at broken-off base 2 mm. Pl. 37: 7
13. Short rectangular iron bar with a round hole in each end, penetrating about 9 mm into the bar. Cf. K. 13759: 14. 27 × 10 × 7 mm
14. Strongly rusted iron ring. Diam. 3.6. Th. 0.5 cm
15. Piece of oval iron ring with rectangular section (4 × 2 mm). From belt-runner?
16. Small double-bead of green glass
17. Small spiral bead of green glass. Pl. 30: 10
18. Piece of bead of turquoise-coloured glass-flux
19. Drop-shaped piece of blue glass, refuse
20. Small piece of green glass of poor quality
21. Piece of flint
- 22-23. Two parts of stoneware bowl, Kün ware, with light green-blue glaze, which has flowed into a thick roll at the lower part of the outside. Dark grey body. The two parts consist of 6 small pieces respectively, now glued together. (Profile as in no. K. 13736: 15.) Diam. of mouth has been 20. H. 7.5 cm
24. Nearly half a Kün bowl, put together from nine pieces. Blue-green glaze on grey body. Most of the pieces ground by the sand and thus the lustre is missing. Diam. of mouth 20.4, of base 6.1. H. 8.4 cm. Fig. 64: 3
- 25-26. Two pieces of Kün bowls, with light green and green-blue glazes
27. Large pieces of rather large stoneware vessel, Ts'i-chou ware, with sgraffito, brown-glazed floral scroll on the outside and plain brown glaze on the inside. Buff body
28. Piece of Ts'i-chou vessel with thin, transparent light yellow glaze covering brown-painted plant

- designs on the outside, plain brown glaze on the inside
29. Fragm. of light green glazed stoneware lotus petal, ornamented with raised scroll and rib (somewhat similar to Pl. 21: 12). Buff body
 30. Small piece of rather soft stoneware with yellow and green glazes
 - 31-33. Three spindle-whorls of grey potsherds
 34. Material for spindle-whorl of red potsherd with unfinished central hole

House K 759 is situated on the top of a *yardang* and at the border of a terrace. There is clay and gravel around the place, perhaps indicating a river-bed. The collection, brought from this ruin by Wang, consists of finds from different periods.

K. 13759:

1. Well-preserved *Wu-shu* coin with short, horizontal, raised line on front beneath the square hole. Diam. 25 mm
2. Copper coin, *Yüan-yu-t'ung-pao* (1086—94). Diam. 25 mm
3. Small bronze socket, probably end-fitting of stick, with pointed half of square section and base of round section, rather similar in shape to the common triangular arrow-heads. Unique. L. 5 cm; Th. less than 1 mm. Pl. 37: 16
4. Triangular bronze arrow-head, of the common Han type, with blunt point and worn edges, rounded straight corners and traces of bronze tang, which has been inserted into an intermediary socketed part (L. c. 2 mm?). L. 27. W. of sides 10 mm
5. Fragm. of ditto with broken-off point, straight corners, partly preserved bronze intermediary part (?), and with traces of rust, possibly from iron tang. Reconstr. L. 27 mm. W. of sides 10 mm
6. Small bronze belt-runner with pointed oval ring and partly open, rectangular strap-holding part. 2.4×2.2 cm; Th. 4 mm. Pl. 34: 4
7. Small bronze belt-hook with the curved end missing. Simple type, probably unfinished. (Cf. e.g. Pl. 4: 12, 14.) L. (3.5) cm. Fig. 9: 2, and Pl. 33: 11
8. Bronze ring with round section and crossing grooves. Unique. Diam. 4.5. Th. 0.5 cm. Pl. 31: 7
9. Bronze sewing-ring, type as on Pl. 35: 12. Diam. 19. Br. 8 mm
10. Short bronze wire with flattened round section, bent up to an open finger-ring, or ear-ring
11. Various bronze pieces, mainly refuse from casting
12. Iron arrow-head with broad, obtuse-angled blade and rounded, narrowing tang. Total L. 12, of tang 7.5 cm. Br. of blade 2.8 cm. Pl. 36: 1
13. Fragm. of iron knife
14. Short iron bar with square section, a deep round hole in each end. $42 \times 10 \times 8$ mm. Pl. 38: 11
15. Ditto with funnel-shaped hole in one end. $22 \times 9 \times 8$ mm
- 16-17. One iron and one copper bar, square in section, possibly standard raw material for trading (?). L. 33 and 35 mm
18. Eight iron pieces from a 6 mm thick plate
19. Small pellet-shaped bead of blue glass
20. Spindle-whorl made of blue limestone, wind-ground
21. Half of crescent-shaped stone knife, broken across a central hole. Br. 4.6. Th. 0.5—0.9 cm
22. Small triangular fragm. of earthenware vessel or lid with very fine, impressed zigzag pattern of type unique in the collections. A-paste with dark grey, glossy outside (from thin coating ?). Pl. 20: 2
- 23-24. Two pieces of flint
25. Small stoneware dish, celadon ware, consisting of two pieces matching each other. Glaze partly ground off by the sand. Inside bottom has slightly visible, incised leaf-designs. Outside along the rim a simple border of four incised lines, which at six points is crossed by three oblique lines. Diam. of mouth 16.2, of base 5.8. H. 3.5 cm. Fig. 62: 1, and Pl. 24: 8

Tati K 760 is situated on clay ground.

K. 13760:

1. Piece from rim of stoneware cup, celadon ware, prob. T'a-yao type of Lung-ts'üan ware, olive-green glaze with relief pattern on outside, consisting of a flower-cup with lanceolate petals, covering the whole of the surface. Pl. 25: 16
2. Small piece from rim of celadon cup with a few horizontal incised lines below the rim

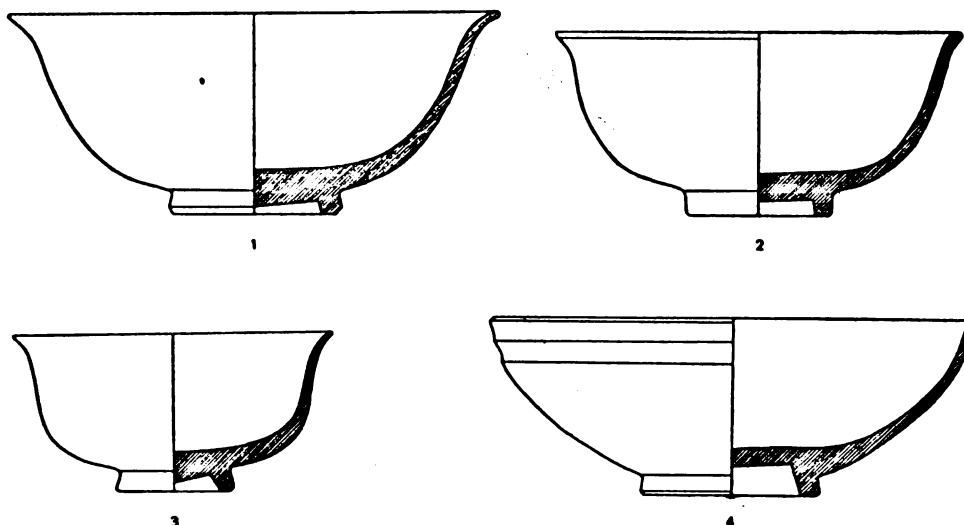


Fig. 63. Bowls. Celadon (1, 2), Ying-ts'ing (3), glazed, porcellaneous stoneware (4). Scale 1/3.
1. K. 13695: 9, 2. K. 13728: 3, 3. K. 13697: 12, 4. K. 13814: 2.

3. Piece from rim of celadon cup, with rather thick glaze and with carelessly incised designs on the outside
4. Piece from rim of stoneware bowl, Kün ware, with blue-green glaze, which is rather flawy and at the rim changed into brownish shade
5. Piece from rim of stoneware bowl with thin, rather poor yellowish glaze on buff body
6. Small piece from stoneware vessel, Ts'i-chou ware, with transparent glaze covering dark grey painting with pattern consisting of incised lines. Buff body. Pl. 22: 11
7. Small piece of stoneware vessel, Ts'i-chou ware, with transparent glaze covering dark brown painted plant (and bird?) designs on the outside. On inside the transparent glaze on biscuit. Pl. 23: 2
8. Fragm. of earthenware vessel with "combed" festoons and annular bands. A-paste
9. Two pieces of a rough, unglazed earthenware vessel, with annular, consecutive borders of impressed lozenges, which have probably covered most of the outside. Dark grey, homogeneous paste, sand-tempered; hardness Mohs 6.5
10. Small fragm. of rough, unglazed earthenware vessel, with vertical borders of impressed "herring-bone" decoration. Light grey, homogeneous paste; hardness Mohs 5.5
11. Small, thin rectangular earthenware ornamental plate, prob. used as appliqué of vessel; strongly ground. Pattern consists of raised diagonal lines with a small raised dot in the central corners (cf. e.g. wooden Han dice such as Pl. 12: 17). Light greyish brown, homogeneous paste. Unique. Pl. 21: 11
- 12-13. One complete and one half spindle-whorl made of grey potsherds
- 14-15. Two fragmentary earthenware spool-shaped net-sinkers of A-type

House K 761 consists of nearly extinguished remains of a house, built of "block" bricks. Quern-stones lie around it.

K. 13761:

- 1-5. Eleven pieces partly matching each other, of medium-sized stoneware vessel, Ts'i-chou ware, which has had a narrow neck and has holes from repair with clamps. Transparent glaze covering brown, painted leaf-designs on the outside, the inside being almost unglazed. Buff body
- 6-12. Eighteen pieces, partly matching each other, of rather large, bulging Ts'i-chou vessel with transparent glaze covering sparsely painted brown leaf-designs on the outside, and also borders of incised, meander-like lines. On inside thin dark yellow glaze. Buff body. A few small holes indicate ancient repair with clamps

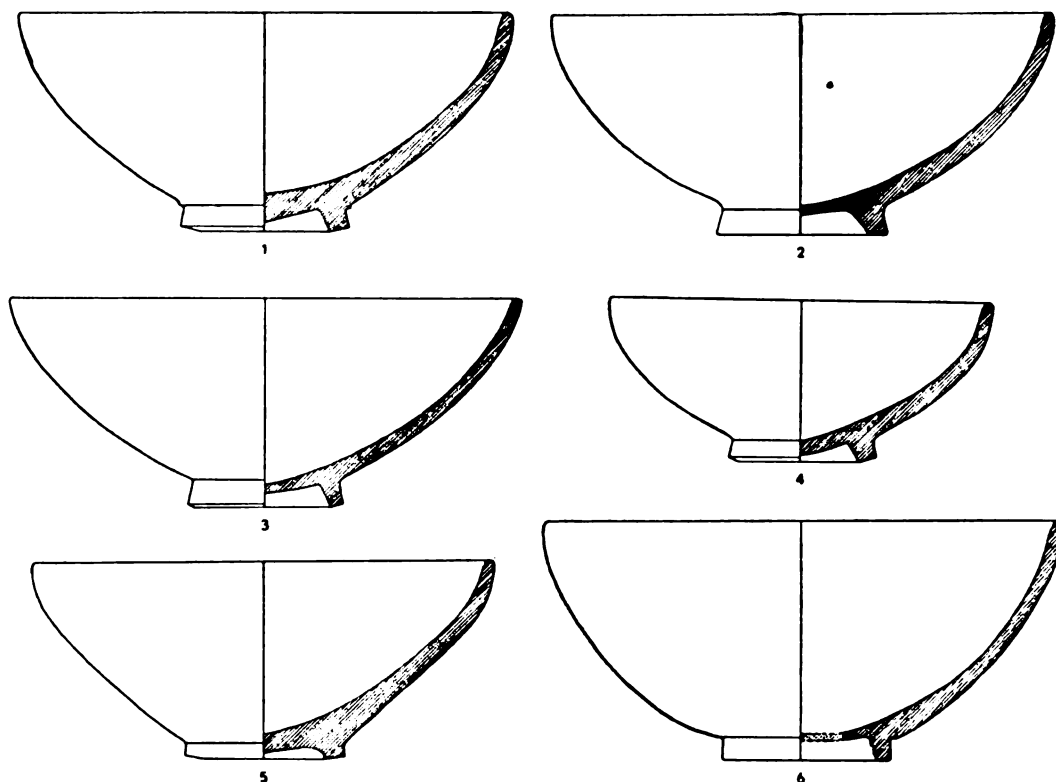


Fig. 64. Bowls. Kün ware. Scale 1/3. 1. K. 13695: 7, 2. K. 13739: 15, 3. K. 13758: 24, 4. K. 13697: 21, 5. K. 13703: 25, 6. K. 13736: 15.

- 13-14. Two pieces of Ts'i-chou vessel with brown-green glaze and sgraffito pattern showing plants and a fish. Buff body. Pl. 22: 4
15. Piece of Ts'i-chou vessel with sgraffito floral designs in dark brown glaze. The inside is unglazed
16. Large piece of fairly large Ts'i-chou vessel with vigorous sgraffito leaf-designs in brown-green glaze. The inside only partly glazed. Buff body. Pl. 22: 8
17. Large piece from mouth of large, thick Ts'i-chou vessel, possibly the same as no. 16
18. Larger part of bulging stoneware vessel with black-brown glaze on both sides. Horizontal grooves and a border of short, deep vertical grooves. Traces of a handle. Dark grey body. Pl. 22: 1
19. Top part of fairly large stoneware vessel with two handles between rim and shoulder. Black and brown flamy (Temmoku-like) glaze which does not cover the actual rim. Glued together from 4 pieces. Holes from ancient repair with iron clamps. Dark grey to yellowish red body. (Similar to K. 13779: 81.) Diam. of mouth 13.5 cm. Pl. 22: 3

House K 762 was never visited by Bergman himself, the finds from different periods being collected by Chin.

K. 13762:

1. Fragm. of (*Wu*)-*shu* coin with narrow rim
2. Fragm. of copper coin with a -*yüan*-; broad rim
3. Various bronze pieces, sheet, fragments and refuse from casting
4. Rectangular iron bar with square section and partly rounded edges, wedge-shaped at one (broken-off) end. (5.5) × 0.8 × 1 cm
5. Fragm. of oval iron ring with outer side and back flat, top side curved. About 6 × 4.5 × 0.4 cm
6. Fragm. of small iron dish, round with projecting rim. Th. 1—2 mm
7. Spherical bead with four shallow grooves, of dark blue glass
8. Small spool-shaped bead of green glass, weathered

9. Small spool-shaped, spiral bead of light blue glass
10. Spool-shaped net-sinker of porous, slag-like ware. L. 5.5 cm
11. Fragm. of whetstone of slate. (4) × 3.5 × 1 cm
- 12-15. Four spindle-whorls made of potsherds
- 16-17. Two halves of spindle-whorls made of grey potsherds
18. Rounded potsherd of grey earthenware
19. Fragm. of earthenware tile with relief pattern consisting of borders of small lotus panels and scrolls, covered by dark green glaze. Pl. 20:21

House K 763 is very decayed and situated on sandy ground. Three quern-stones were seen in the vicinity.

K. 13763:

1. Copper coin, *Yüan-yu-t'ung-pao* (1086—94); flat back. Diam. 24 mm
2. Fragm. of fairly large copper coin, probably a *Ch'ung-(ning-chung)-pao* (1102—06). Diam. c. 35 mm
3. Small spindle-whorl (?) of bronze with large flaws from casting. One side flat, the other side vaulted and with four projecting diagonal lines, coarsely made. The hole is square. Diam. c. 21 mm. Th. 10 mm
4. Piece of bronze plate, slightly vaulted, prob. from vessel. Th. 1.5 mm
5. Small piece of stoneware vessel, Ts'i-chou ware, with red underglaze painted designs, and on-glaze light green spots of enamel
6. Spindle-whorl made of grey potsherd. Diam. 4 cm

Temple K 764

Together with Walled enclosure K 710 this small temple establishment, called Tsaghan-suburga, is the largest building in eastern Erego-khara-burukh. The two main structures are badly decayed and the measurements are therefore unreliable. However, the northernmost ruin appears to consist of a walled quadrangle of "block" bricks probably 12 m square, containing a number of rooms of varying size. The outer wall is 1 m thick, and its height above the ground 5.5 m and above the floor 2.8 m. The inner walls are 55 cm thick. Less than 10 m south of this building there is another one, placed obliquely to the first. It is constructed in quite a different style of thin bricks and wooden pillars, which are either walled-in or detached. The ground-plan was presumably rectangular and comprised an inner space surrounded by an outer wall of the same kind with a fairly large hall at the eastern short-end. The western short-end faced two, possibly indoor, stupas of different form. One has a round base, which is all that can be said about it, and the other a square base with the square socle superimposed diagonally. The sides of the socle are of plastered brick pillars disposed diagonally in such a way that the outline of the ground-plan resembles steps. In three places these pillars are crossed by triple horizontal mouldings (see Pl. 65). The north building may have been the monks' quarters, the south one the temple hall.

All the finds were discovered by Bergman in the debris below the circular stupa. The most important of these were parts of the image of a god; this was made of clay, half life-size, and painted in lovely colours, chiefly blue and red on a white ground. A piece of an arm was included in the collection as well as some of the innumerable clay *tsa-tsas* and pointed oval clay reliefs, all of which votive offerings were found in the debris.

K. 13764:

1. Conical *tsa-tsa* of clay, type as no. 2. Pl. 21:6. Diam. 7. H. 5.5 cm
- 2-4. Three smaller *tsa-tsas* of clay with more marked base than no. 1. Diam. 5. H. 4 cm. No. 2. Pl. 21:6
5. Small piece of bone, wrapped in a piece of paper, inside a fragmentary *tsa-tsa*. Possible traces of red writing on the paper
- 6-9. Four pointed oval relief plates of clay, showing a seated Buddha surrounded by writing in very low relief. L. 5.3—4.9 cm. No. 7. Pl. 21:2
10. Piece from an arm of a fairly large image, made of clay and bundles of reed, the latter

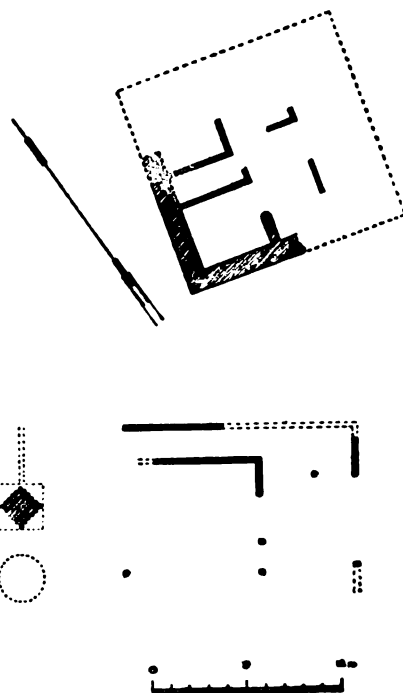


Fig. 65. Plan of the ruined temple K 764
(Tsaghan-suburga).

constituting the core. White painting with a border of simple blue and red designs between two rings of clay, possibly representing a bracelet

11. Small pieces of painted plaster from walls of the temple or stupas, painted with red, white and black bands

Tati K 765 with surface finds is in the vicinity of the preceding Tsaghan-suburga temple. According to Bergman's note-book the finds were made in three different sets of circumstances: a) on *tati* close to the temple, b) as scattered finds around the temple, and c) on *tati* about 80 m SE of the temple.

K. 13765:

1. Strongly weathered copper coin, *K'ai-yüan-t'ung-pao*. Diam. 25 mm
2. Large, well-preserved copper coin, *Ch'ung-ning-t'ung-pao* (1102—07). Diam. 34 mm
3. Fragm. of large coin, *Ta-(kuan)-(t'ung)-pao* (1107—11). Diam. 41 mm
4. Copper coin, somewhat fragmentary, (*Yüan*)-*feng-t'ung-pao* (1078—86). Diam. 24 mm
5. Copper coin, *Huang-sung-t'ung-pao* (1038—40). Diam. 25 mm
6. Copper coin, *T'ien-sheng-yüan-pao* (1023—32). Diam. 24 mm
7. Copper coin with indistinct legend, but prob. *Yüan-feng-t'ung-pao* (1078—86); broad rim. Diam. 24 mm
- 8-9. Two frs. of copper coins
10. Fragm. of thin bronze finger-ring consisting of a bent-up sheet band. Br. 3—5 mm
11. Fragm. of bronze plate or sheet with simple, pressed border along the rim, consisting of "flaws" in a wavy line. Pl. 36: 18
12. Various bronze pieces, fragments and refuse from casting
13. Spherical bead of green glass, with piece of bronze wire sticking in the hole. Pl. 30: 8
- 14-15. Two nearly spherical beads of cornelian
16. Spherical bead of white stone
17. Oblong, hexagonal bead of cornelian or agate
18. Small pendant of light yellow-green stone, with nearly triangular section. Pl. 30: 46
- 19-20. Two halves of beads, no. 19 ring-shaped and of green glass, no. 20 spherical and of light brown glass

21. Rather small, egg-shaped red stone
22. Nearly triangular iron link from chain. L. 4.5. Br. 3.2 cm
23. Fragm. of iron hoe-blade with round base formed of folded wings and widening towards the broken-off cutting-edge. Th. 1.5 mm at base and 0.5 mm at the other end
24. Larger part of stoneware dish, celadon ware, with glaze covering surfaces except a ring on outside bottom, the latter being unglazed and therefore turned into reddish brown in firing. Larger part of rim missing. On both sides radial grooves extending to the rim, where each groove ends in a curve. Thick, light grey body. Diam. of mouth 25.5, of base 16.5. H. 5 cm. Fig. 62: 6, and Pl. 24: 11
25. Lower part of small, flat, round bottle with low foot-ring (portable so-called "pilgrim's bottle"), made of porcelainous, white stoneware (Ting-like). The glaze now ground off by action of sand. Traces of "cash" designs in low relief. Unique. Br. 4.7 cm
26. Spindle-whorl of light yellow stoneware, with remains of green glaze. Vertical grooves around the edge. Diam. 3.5. Th. 1.7 cm
27. Spindle-whorl or net-sinker made of thick, brown-glazed piece of stoneware
- 28-35. Six complete and two halves of spindle-whorls made of potsherds
36. Fragm. of whetstone of green slate

House K 766 is built of "block" bricks, and measures about 8 × 19 m.

K. 13766:

1. Cylindrical copper cover to pot, the diam. of its neck having been 7.5 cm. The cover consists of two parts firmly attached at about half the height in such a way that the rim of the top part is bent up over the projecting rim of the lower part. At top centre a round hole which has been filled by some knob ornament or handle. H. 5.7 cm. Pl. 36: 21
2. Fragm. of large, round bronze sheet disc with central hole. The rim has been about 5 cm broad and is attached to the main part by means of obliquely cut, rectangular flaps or fringes, alternately applied to front and back. Diam. may have been c. 31 cm
3. Ear-pendant made of bent-up bronze wire, at one end with a malachite-coloured bead attached by means of fine bronze thread. Broken in three pieces. L. 5 cm. Pl. 35: 1
4. Small spherical bead of blue glass with inlaid brown stripe around the middle. Diam. 8 mm
5. Oblong, hexagonal bead of cornelian or agate. L. 11 mm
6. Two iron links from chain, attached to each other by rust. L. of each link 8. Th. 0.7 cm
7. Barrel-shaped iron lock, fragmentary and strongly weathered. One end closed, the other end damaged. L. c. 5. Diam. at middle c. 4.5 cm; Th. of material prob. 4—5 mm
8. Complete melting-pot with pointed bottom, of thin black ware. Diam. 4. H. 5.5 cm. Pl. 20: 1
- 9-10. Two small spindle-whorls made of potsherds
11. Round decorated end-tile of brownish red brick ware, the moulded design representing an ogre mask. Diam. 11 cm
12. Complete stoneware cup, Ting ware, with 1.6 cm high profiled foot. The glaze is almost totally ground off by action of sand, thus giving a very beautiful dull lustre to the surface of the bone-white body. Diam. of mouth 10.1, of foot 3.4. H. 5.5 cm. Fig. 60: 1, and Pl. 26: 1

House K 767

K. 13767:

1. Copper coin, *Siang-fu-t'ung-pao* (1008—17). Diam. 25 mm
2. Fragm. of copper coin with narrow rim, probably a *Cheng-(lung-t'ung-pao)* (1156—61)
3. Fragm. of fairly large copper coin, prob. (*Ch'ung*)-*ning-(chung-pao)* (1102—06)
4. Small nearly spool-shaped bead of blackish green glass
5. Round, flat bead of weathered white stone. Diam. 13 mm
6. Spherical bead of yellowish white glass (?)
7. Half of spherical bead of blue, untransparent glass
8. Spindle-whorl of slag-like earthenware
9. Half of spindle-whorl made of grey potsherd
10. Half of rectangular stone knife with hole at middle, well-ground. Br. 3.3. Th. 0.7 cm

11. Fragg. of small whetstone of slate
- 12-13. Two identical small bronze lamellae, rectangular with raised front and with a small hook at back for hanging on to a wire or similar object. They have formed a pair. Unique. $2.1 \times 1.05 \times 0.2$ cm
14. Various bronze pieces, mainly large lumps from casting

Grave K 768 and Grave 63

These two graves near the Tsaghan-suburga temple were the only ones found by Bergman in the whole of the Edsen-gol region, a rather singular fact especially when dealing with a Chinese settlement area. Its topography is, however, of such a kind that if the other supposed graves were constructed in the same way as these two, without identification marks above ground, then it is clear that one can come across a few of them only by pure chance. Further, the habit of repatriating the corpses of Chinese in foreign countries has existed from the earliest dynasties down to our days; Bergman and others observed for instance at Mao-mu that coffins were placed outside the settled region at the border of gravel desert, above ground, waiting for some future opportunity to be taken back to China Proper. The chief reason for the lack of graves in Edsen-gol may, however, be the fact that during the greater part of its settled history this region was inhabited by non-Chinese tribes, who supposedly practised other methods of disposing of their corpses, e.g. by burning.

The two graves, Grave 63 and Grave K 768, which lie near each other, are disposed N 16° E and N 31° E respectively with the heads to the north. They are rectangular in shape, measuring c. 0.5×2.4 m and 0.7×1.8 m. The plans have unfortunately been lost.

The finds were made in the shorter grave: the beads of glass or stone were at the neck of the skeleton and the iron fragments at its waist. The excavation was carried out first by Chin and then finished by Bergman the following day. The small blade of a foxtail-saw is the only complete saw-blade found in Edsen-gol, differing also in shape from the fragments found in each of two Han ruins. It may have been used for surgical purposes rather than wood-working, an assumption based on the form, the sheath and its occurrence in a grave, where no other wood-working implements were found. The other iron fragments found at the waist of the skeleton seem to be the remains of a forked tool of uncertain use, possibly also of surgical nature. The beads, all made of the same material, which is either weathered stone or whitish glass, have few parallels in the Edsen-gol collections: K. 13703: 18 (from coll. of finds from different periods), K. 13738: 4 (prob. "K.K.-time" coll.), K. 13742: 27 (coll. of finds from different periods, with *Wu-shu* coins and 12th century coins) and K. 13767: 5 (coll. with 11th and 12th century coins). Summarizing, the objects from the grave show little in common with the finds from the other localities in the Edsen-gol area.

K. 13768:

1. Blade of iron foxtail-saw, complete except for major portion of tang. Successively narrowing from base (Br. 1.2 cm) towards slightly rounded fore-end (Br. 0.8 cm); back edge is straight (Th. 0.2 cm), while toothed edge is rather irregular. The small, equilateral teeth, c. 11 per 2 cm, are (intentionally?) turned slightly outwards at irregular intervals. Rear part of blade has traces of wooden handle, attached at the same obtuse angle as the tang, and possibly formed like the handle A 16: 4. — In the rust of both sides there are also traces of a leather sheath, seamed along the back (cf. the sheath Pl. 6: 2 a). Fig. 66, and Pl. 37: 12
- 2-4. Three fragments of prob. one iron implement, oblong with round or oval section, handle-ring at one end and shaped like a fork at the other, narrower end. Unique. Reconstr. L. c. 17.5 cm. Fig. 67: 1
5. Spool-shaped bead of whitish, untransparent material, weathered stone or glass. L. 22. Diam. 11 mm

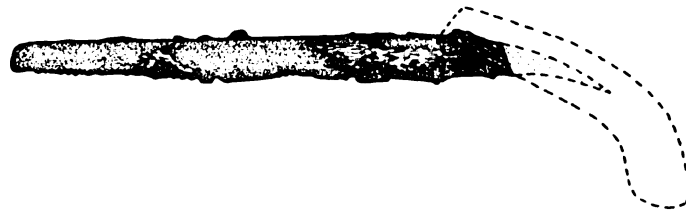


Fig. 66. Iron blade of a foxtail-saw, K. 13768: 1 (Pl. 37: 12), found in a grave. Traces of a seamed leather sheath, and of a wooden handle. Half size.

6. Spherical bead of the same material as the previous bead. Diam. 11 mm
7. Flattened spherical bead of the same material as the preceding beads. Diam. 18 mm. Pl. 30: 7
- 8-10. Three spool-shaped, hexagonal beads with concave sides, of the same material as the preceding ones. L. 18 mm
- 11-19. Nine small frs. of beads of the same material as the other beads. Pl. 30: 23

House K 769 consists of nearly extinguished remnants, situated in sand with quern-stones and threshing-stones lying around. The finds were made by Chin, who may possibly have gathered objects from the neighbouring *tati* as the finds are from different periods and rather too numerous to be from a single house ruin.

K. 13769:

1. *Wu-shu* coin. Diam. 25 mm
2. Ditto. Diam. 24 mm
3. Copper coin, *Yüan-feng-t'ung-pao* (1078—86). Diam. 24 mm
4. Fragn. of large copper coin, prob. (*Ch'ung-ning*)-*t'ung-pao* (1102—06)
5. Fragn. of copper coin, prob. (*Cheng*)-*lung-yüan-pao* (1156—60)
6. Fragn. of copper coin with illegible legend
7. Various bronze pieces, sheet and refuse from casting
8. Spool-shaped bead of light grey agate with slightly purple and brown stripes around one end. L. 23. Diam. 12 mm
9. Spool-shaped bead of black-brown glass with four broad stripes of white, untransparent glass. L. 24. Diam. 10 mm. Pl. 30: 25
10. Spherical bead of cornelian. Diam. 8 mm
11. Round, nearly flat gem of stone, white and yellowish flamy, with perforated ornament representing an artificial flower-cup. From the central circle, which has a depressed front, extend three other circles, each with a small central hole, alternating with three leaves. Back flat, front slightly vaulted. Unique. Diam. 2.8. Th. 0.45 cm
12. Fragn. of spindle-whorl of gypsum crystal
13. Piece of flint, prob. for making fire
14. Fairly large, square-sectioned, solid iron bar of uncertain use, narrowing towards one end which is bent at right angles, broken off at the other end which seems to have been bent up, too. L. 15 cm. Pl. 38: 5
15. Oblong iron implement, probably cutting-knife or chopper. One end straight and narrowing (tang or handle); the rest of the tool is concavo-convex, the cutting-edge being at the concave side. Oval section. Unique. L. 10.8. Br. at middle 2 cm. Pl. 37: 8
16. Iron link of chain or ring from bridle, rounded square, with remains of bent-up iron piece at one corner. 5 × 4 cm
17. Flat piece of iron, possibly fragn. of broad sword blade. Br. 6.3 cm
18. Half of round iron ring
19. Iron nail
20. Complete stoneware dish, celadon ware, put together from nine pieces. Small indistinct carved design centered inside. Diam. of mouth 16, of base 6.6. H. 3.6 cm. Pl. 24: 5
21. Small, complete celadon dish put together from 12 pieces, with a small indistinct, carved ornament centered inside. Foliate on both sides. Diam. of mouth 13, of base 6.4. H. 3.1 cm. Fig. 61: 1, and Pl. 24: 10
22. Fragn. of small celadon dish of kind similar to no. 21, but with plain surfaces. Glaze to a large extent ground off by the sand. On inside, centered pattern in low, indistinct relief, showing two fishes in a circle. On outside, simple incised lotus-design. Greyish white body. Diam. of mouth has been 12.3, of base 5.6. H. 2.9 cm. Fig. 61: 4, and Pl. 24: 4

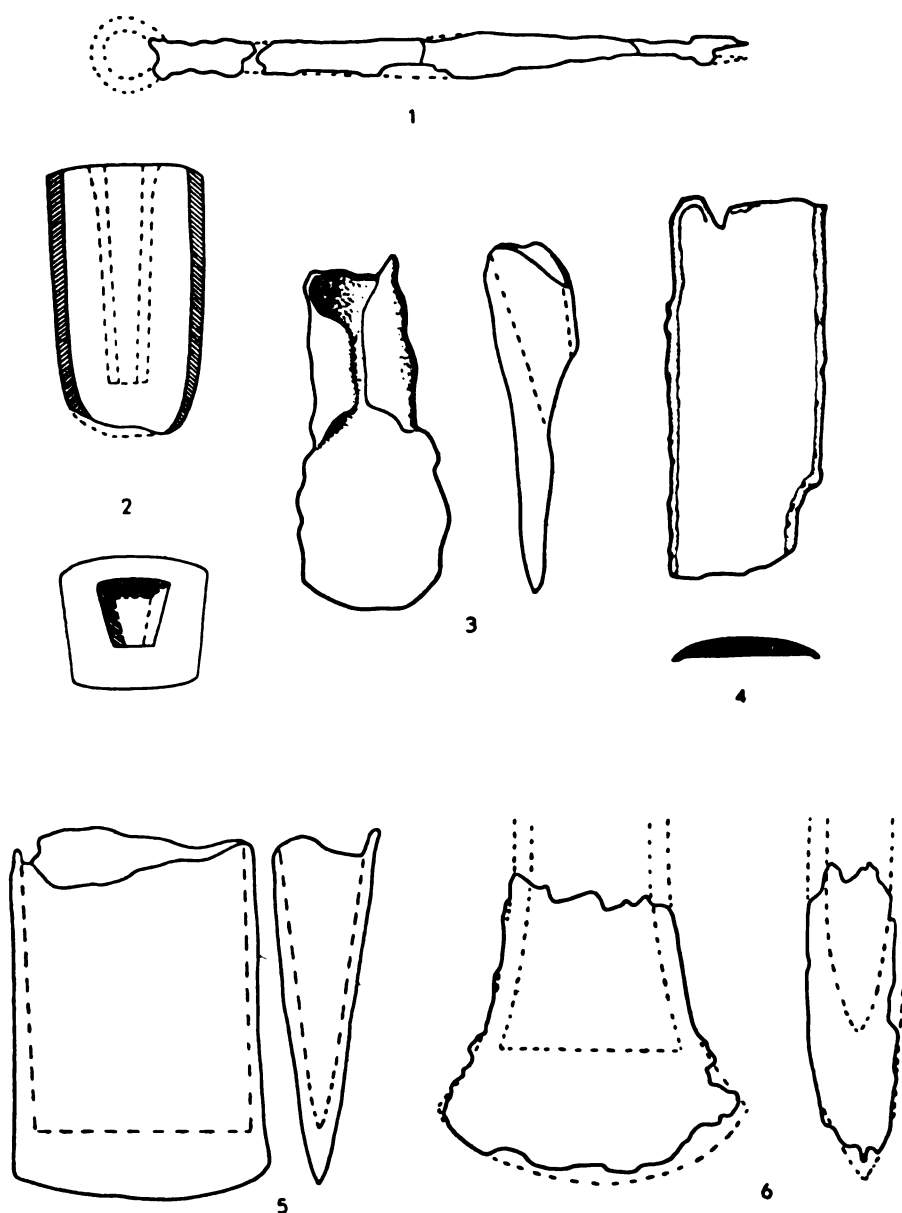


Fig. 67. Various iron implements. Scale 1/2. 1. K. 13768: 2—4, 2. A. 8: II; 222, 3. K. 13796: 7 (Pl. 36: 25), 4. A. 8: II S; 55, 5. A. 10: 7 (Pl. 5: 14), 6. K. 13710: 87.

23. Celadon stem-cup, about one third of the bowl missing. Centered inside, carelessly incised pattern of scrolling lines. Around on the outside, a stylized five-petalled blossom, and above this a simple border of parallel lines at some points crossed by short oblique lines. The inside of the foot is also glazed, except rim. Diam. of mouth 12.4, of base of foot 3.8. H. 8.5 cm. Fig. 60: 2, and Pl. 26: 8
24. Fragm. of stoneware stem-cup, Ts'i-chou ware, on rather low foot, with thin, yellow glaze

which does not cover the whole of the foot. Put together from 5 pieces. Buff body. Diam. of mouth has been 9.5, of base of foot 4. H. 6.7 cm. Fig. 60: 6

25. High, funnel-shaped foot of stoneware cup, Ts'i-chou ware, buff body partly covered with thin, white-yellow glaze. Diam. of base 5.1. H. 4.2 cm
26. Three pieces, matching each other, of rather large stoneware bowl, Ying-ts'ing ware. On inside, probably relief designs

27. Two small pieces, matching each other, from rim of stoneware cup, Ying-ts'ing ware. On inside, floral pattern in low relief
28. Piece from side of porcelain cup, prob. stem-cup, underglaze blue decoration. Outside, portion of sketchy three-clawed dragon (type as on Pl. 27:3). Inside, traces of border with classic scroll around rim which has been repaired by means of perforated holes; in cavetto, portions of dragon painted in slip under the glaze (*an hua* decoration — cf. e. g. K. 13801: 14 and 15)
29. Piece from neck of stoneware vessel, Ts'i-chou ware, with handle decorated with three grooves.
- Sgraffito ornaments in dark brown glaze on outside, blackish brown glaze on inside. Buff body. Pl. 22:9
30. Mouth of thin-walled Ts'i-chou jar with dark brown glaze. Diam. 5.5 cm
31. Round piece of earthenware vessel with unfinished central hole, material for spindle-whorl
- 32-34. Three spindle-whorls made of potsherds
35. Biconical stoneware spindle-whorl, decorated with vertical grooves. Diam. 3.1. Th. 2 cm. Pl. 20:6
36. Fragm. of spindle-whorl of limestone
- 37-39. Three fragm. of whetstones, two with a hole

House K 770 is situated at the edge of a cone amongst dunes, and was excavated twice by Chin.

K. 13770:

1. Fragm. of copper coin, *Hi-ning-(yüan-pao)* with archaic writing and broad rim
2. Fragm. of small bronze mirror with high rim, inside which the surface is wholly covered with very indistinct pattern. Diam. 6.7 cm; Th. of rim 4 mm, of central part 1 mm
3. Rectangular bronze strap-holder, the front of fore-end having four grooved projections. 3 × 1.4 cm. Pl. 34:6
4. Small, leaf-shaped bronze ornament, consisting of a plate with lobular edge with pressed "flaw" in each lobe, and with two holes (for rivets or sewing). 2.1 × 2.1 cm
5. Ear-pendant consisting of S-bent bronze wire, one side painted green. L. 4.5 cm; Th. 1.5 mm. Pl. 35:2
- 6-7. Two small bent-up bronze rods
8. Various bronze pieces, sheet and refuse from casting
9. Small cowrie shell with ground-off dorsal part. L. 17 mm
10. Small biconical bead of turquoise-blue untransparent glass
11. Half of spherical bead of yellow-brown chalcodony
12. Fragm. of flattened spool-shaped (?) bead of yellow-brown glass
- 13-14. Two iron pieces, no. 14 a nail
15. Earthenware net-sinker with longitudinal and crossing grooves, B-type except that the latter grooves occur only on one side
16. Small spool-shaped earthenware net-sinker of A-type
17. Fragm. of large, spool-shaped bead of black, untransparent glass. Original L. 24. Diam. 11 mm
- 18-19. Two frs. of small whetstones with suspension-holes
- 20-21. Two pieces of flint
- 22-25. Four spindle-whorls made of grey potsherds
- 26-28. Three frs. of spindle-whorls made of red and blue-grey potsherds
29. Slightly rounded piece of potsherd with unfinished hole at centre, material for spindle-whorl

House K 771 was visited by Bergman and excavated by Chin. Bergman hesitated in identifying the collection, comprising finds from different periods, with this ruin, and it is possible that some of the objects derive from the *tati* region NE of the ruin.

K. 13771:

1. Fragm. of *Wu-(shu)* coin, which has a small comma-shaped line near the rim above the hole on the front
2. Fragm. of *K'ai-(yüan)* coin
3. Copper coin, *Yüan-yu-t'ung-pao* (1086—94). Diam. 30 mm
4. Copper coin, *Chi-tao-yüan-pao* (995—98). Diam. 25 mm
- 5-7. Three frs. of copper coins, prob. from the Sung dynasty
8. Small, flat bronze strap-mounting (?), slightly vaulted lengthwise. One half consists of a semi-circular frame, the other part being three-lobular and with two holes and one broken-off rivet between the holes. The edges are bevelled. 3.8 × 2.1 cm; Th. 2 mm. Pl. 34:3

9. Round bronze wire, thickening towards one end, the other end bent up to a loop. Tongue of bell? L. 5.8 cm; Th. 2—4 mm. Pl. 33: 14
- 10-11. Two small bent-up bronze wires or rods, no. 10 S-shaped and prob. from ear-pendant
12. Various bronze pieces, fragments and refuse from casting
13. Spool-shaped bead of blue glass with fine incised lines in white
14. Spherical bead of white, untransparent glass
15. Spool-shaped bead of black-green glass with inlaid white glass thread around the middle. Pl. 30: 24
16. Fragm. of small iron knife
17. Small iron ring with square section. Diam. 2.5 cm. Th. 5 mm
18. Square, strongly weathered limestone plate with round hole through the middle, on each side of which a smaller, well-bored hole has been made. One narrow-side has a deep, broad moulding. 4×4 cm
- 19-21. Three small whetstones of slate, two with a suspension-hole
22. Spindle-whorl made of brick-red potsherd
23. Small stoneware ewer, Ts'i-chou ware, of which neck and handle are missing. Buff body covered with dark brown glaze except on lower part. Same kind of glaze on top part of inside. 11. (12). Diam. of belly 9 cm. Pl. 22: 2

House 64 starts the 6th consecutive row of house ruins on the map. Only a few bricks are left, lying at the edge of a cone with *yardangs* around.

Stupa 65 is about 2 m wide at the base, and more than 4 m high.

House K 772 was not visited by Bergman.

K. 13772:

1. Fragm. of copper coin, (*Süan*)-*ho-t'ung*-(*pao*) (1119—25). Diam. c. 33 mm
2. Fragm. of copper coin, prob. *Kia-yu-t'ung-pao* (1056—64)
3. Triangular bronze arrow-head of the common Han type, with small, pointed barbs and one small triangular depression on each side. Rather blunt point. L. 32, W. of sides 10 mm
4. Oval bronze boss with longitudinal grooves and on back a large central rivet. Unique. 2.6×1.4 cm. Pl. 32: 21
5. Various bronze pieces
6. Five-lobular rosette-disc of almost untransparent chalcedony. One side flat, the other side vaulted and with carelessly made partition grooves. Diam. 2 cm; Th. 4.5 mm
7. Biconvex grey-blue stone. Well polished. Diam. 15, Th. 8 mm
8. Ditto with simple design on both sides, consisting of crossed, incised lines. Diam. 15, Th. 7 mm
9. Small red stone, spherical by nature
10. Piece of blue-green glass plate
11. 7-sided, flat bead of cornelian. Diam. 16, Th. 9 mm
12. Fragm. of thick, ring-shaped bead of cornelian. Diam. 14 mm
13. Spool-shaped bead of light brown stone or glass. L. 20. Diam. 12 mm. Pl. 30: 21
14. Fragm. of ring-shaped bead of yellow-brown glass. Diam. 14 mm
15. Fragm. of spool-shaped bead of yellow-brown stone (agate ?)
16. Fragm. of bulb-shaped bead of white glass. Diam. 12 mm
17. Fragm. of spherical bead of white stone. Diam. 10 mm
- 18-19. Two small frs. of spherical beads of blue glass
20. Fragm. of rectangular brick with a large, round hole. Th. 3.3. Diam. of hole 2.2 cm
- 21-25. Five spindle-whorls made of grey potsherds
- 26-29. Four frs. of spindle-whorls made of potsherds
30. Half of spindle-whorl of dark blue limestone
- 31-33. Three frs. of whetstones, of which one has a hole for suspension

House K 773 is of rather large size and built of "block" bricks. Bergman noted several quern-stones lying around; they were made of light-coloured granite, which must have been imported to this region from outside. The finds were made by Wang.

K. 13773:

1. Small fragm. of (*Wu*)-*shu* coin
2. Fragm. of *K'ai-yüan* coin
- 3-5. Three small frs. of copper coins
6. Triangular bronze arrow-head of the common Han type, with rounded straight corners and traces of bronze tang. L. 29, W. of sides 9 mm
7. Bronze buckle, with deformed oval ring, which

has a small knob on its foremost point, and with rectangular strap-holding frame. The iron tongue is turned backwards. 3×2.6 cm. Pl. 33: 20

8. Piece from rim of bronze mirror. The rim is thick and broad (Br. 1.4 cm), gradually becoming thinner towards the main central part of the mirror. Inside the rim a rope-like band in low relief, and traces of relief zigzag band. Diam. of mirror has been c. 12 cm; Th. of rim 3—3.5, of main part 2 mm
9. Various bronze pieces, sheet and refuse from casting
10. Two frs. of slender iron stirrup with the side bars round in section. The strap-holder at top has the form of a rectangular frame. H. has been 15—16. W. c. 10 cm. Th. of bars 7 mm. The rust is of a different kind from that of the other archaeological finds, and thus these frs. may be recent
11. Piece of iron, flat handle of scoop (?) with round hole (for suspension?) at the rounded top
- 12-13. Two small pieces from neck with rim of porcelain vessel, prob. jar of *kuan* shape, underglaze blue decoration. Outside, double to treble lines around rim and a single line around base of neck, between which is a border of serpentine waves breaking to the right. Interior coated unevenly with same thick glaze as on exterior.

Th. 0.55—0.8 cm. Diam. of mouth prob. c. 16 cm. H. of neck 3 cm. —: 12 Pl. 28: 14 (Cf. serpentine waves of similar type on Pl. 32, Pope 1952)

- 14-17. Four largish pieces from side of porcelain vase, blue decoration. Outside, portions of large powerfully drawn dragon (type as in the high pear-shaped David vase, dated in corr. to A.D. 1351, reproduced on Pl. 36, Pope 1952; cf. *idem* pp. 63 and 41). The body appears on all sherds. —: 15 shows, besides the large body scales drawn in blue with white edges, the narrow band of white central scales. —: 17 shows section of the deeply serrated dorsal fin. —: 14 shows part of a leg, and a flame, —: 16 a long slender curving claw. Th. 0.7—1.05 cm. Diam. at moulding about 26 cm. —: 15 Pl. 28: 15
18. Piece of porcelain bowl, blue decoration. Outside, slender leaves within border of lines, and below, lotus panel. Inside, traces of plant scroll border around rim. Th. 0.3—0.7 cm
- 19-22. Four spindle-whorls made of grey potsherds
23. Rounded, grey potsherd with unfinished central hole, material for spindle-whorl
- 24-25. Two halves of spindle-whorls made of potsherds
26. Round piece of potsherd
27. Piece of much worn whetstone with suspension-hole

House K 774

K. 13774:

- 1-2. Two copper coins, *T'ai-p'ing-t'ung-pao* (976—83). Diam. 24 mm
3. Fragm. of copper coin, *Ch'ung-ning-chung-pao* (1102—07). Diam. has been 34 mm
4. Fragm. of copper coin, prob. *Chi-(p'ing)-t'ung-pao*, (1064—68)
5. Ear-pendant of the common S-bent bronze wire type, the thin end partly split up. L. 4.5 cm
6. Small rectangular bronze sheet with two holes at the ends. 12×27 . Th. 0.5 mm

7. Various bronze pieces
8. Round, flat bead of cornelian. Diam. 10. Th. 4.5 mm
9. Spherical bead of bluish purple glass
10. Half of spherical bead of blue-green, untransparent glass. Diam. 12 mm
11. Piece of thick, dark green glass. $38 \times 18 \times 9$ mm
- 12-14. One complete and two half spindle-whorls made of potsherds
15. White piece of chalcedony

Tati K 775. The extension of this *tati* is not clear, except that it is situated between Houses K 776 and 68. The pot ascribed to this *tati* may have been found some 50 m NE of it, according to one note.

K. 13775. Vase of unglazed stoneware with rather high and narrow neck, put together from several small pieces. Around the shoulder a border of two incised zigzag lines between two annular lines. Almost the whole of the body below the shoulder is covered with moulded or pressed pattern of small lozenges. Dark grey, homogeneous paste; hardness Mohs 6.0. H. 22. Diam. of belly 14.8 cm. Pl. 19: 2

House K 776 is now totally destroyed. Several quern-stones were seen lying around the ruin.

K. 13776:

1. Large bronze disc (cymbal ?) with cylindrical boss at the middle, strongly weathered, and broken in pieces. The boss has had a small suspension-hole at its top. Diam. of disc 24.6, of boss 7.5. H. of boss has been c. 3 cm; Th. of material c. 5 mm. Pl. 31: 12
2. Small fragm. of bronze vessel(?) with complicated pattern in low relief. Th. 1.3 mm
3. Large segment of round iron disc (?). Th. 10—14 mm. Diam. of assumed original disc 18 cm
4. Fragg. of rather well-polished wooden peg with round section, broken off at one end. L. (10.3) cm; Diam. 5—8 mm
5. Sliding disc of churn, consisting of plano-convex wooden oval disc with square central hole, one round hole near one short end and a rectangular hole near the other end. At middle of the longer sides one deep, rectangular groove or opening. Strongly weathered and partly split. Unique. Diam. c. 14. Th. 3.5 cm. Pl. 40: 11
6. Three pieces from neck of stoneware jar with brown glaze

House 66 is a rather small ruin, whose ground-plan is shown in Fig. 44. A quern-stone was seen near it.

House K 777

K. 13777:

1. Copper coin, *Hi-ning-yüan-pao* (1068—78). Diam. 23 mm
2. Fragg. of copper coin, prob. (*T'ai*)-*p'ing-t'ung*-(*pao*) (976—84). Pl. 24: 3
3. Fragg. of copper coin, *Hien*-(*p'ing-yüan*)-*pao* (998—1003)
4. Fragg. of copper coin, *Chi-tao*-(*yüan-pao*) (995—97)
5. Fragg. of fairly large copper coin, *Yüan*-being the first, -*pao* the fourth character
6. Fragg. of copper coin, *Ta*- the first, -*pao* the last character
7. Fragg. of copper coin, a -*t'ung-pao* type
8. Fragg. of copper coin with a *Wu*-
9. Strongly corroded copper coin, possibly a *Wu-shu*
10. Small fragm. from lobular rim of bronze plate (mirror ?) with pattern in low relief
11. Fragg. of bronze-sheet band, bent up at about the middle, with incised leaf-designs (possibly made with the point of a knife). At the top of one broken-off end there are three small stamped "flaws" across the band. At two points on the middle line there is a carelessly made hole, spoiling the pattern. Br. 9. Th. 0.3 mm
12. D-shaped bronze ring, poss. strap-holder. Unique. 2.4 × 1.7 cm
13. Small open ring of bent-up bronze wire, ear-ring or portion of ear-pendant. Diam. 15 mm
14. Bronze fragments, sheet and refuse from casting
15. Spherical bead of light brown stone. Diam. 13 mm
16. Spool-shaped bead of olive-green glass. L. 15. Diam. 7 mm
17. Small spool-shaped bead of white, untransparent glass. L. 8 mm. Pl. 30: 18
18. Very small spherical bead of white glass. Diam. 4 mm
19. Fragg. of rosette-shaped bead of blue-green glass
- 20-23. Four small frs. of blue glass beads
24. Fifteen pieces, partly matching each other, of stoneware bowl. Kün ware. Dark blue rim, the colour changing dropwise downwards into main glaze, which is light blue-green, on the outside rather flawy besides. Dark grey body. Diam. has been c. 18 cm
- 25-28. Four pieces of prob. one stoneware cup, celadon ware, on inside with floral pattern in low relief
29. Piece of small globular celadon vase
30. Small piece of porcelain vase or bottle, under-glaze blue decoration. Outside, relatively large chrysanthemum flower-cup close to rim. Interior unglazed. Th. c. 0.3 cm
- 31-32. Two small pieces from rim of stoneware bowls with dark brown glazes on dark grey, rather thin body
33. Piece from rim of rather larger stoneware vessel with dark brown glaze on light yellow body. The rim was bent up double towards outside before glazing
34. Piece of bulbous stoneware jar, Ts'i-chou ware, with horizontal stripes of light brown glaze on the outside, the inside wholly covered with the same glaze. Buff body
35. Piece from mouth of rather small stoneware bottle, Ts'i-chou ware. Transparent yellowish glaze
36. Head of iron nail, diam. 16 mm. Diam. of pin 9 mm
- 37-48. Six complete and six fragmentary spindle-whorls made of potsherds
49. Half of spindle-whorl (?) of whitish stone or coarse stoneware. Diam. 3.8, Th. 2.6 cm

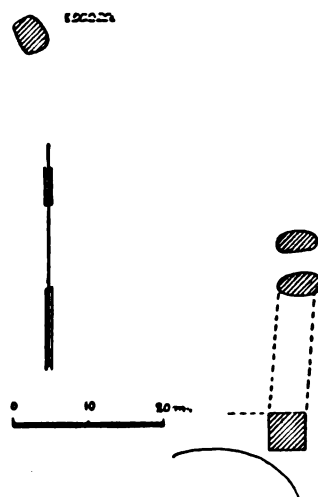


Fig. 68. Sketch-plan of the site K 778. The square at the base of a tamarisk cone is referred to in the text as Tower A, the central, rounded structures (gate bastions ?) as B, and the topmost, left-hand structure as Tower C.

- | | |
|--|---|
| 50. Round, blue-black potsherd with deep cord-impressions | 55. Round piece of sandstone plate. Diam. 4.7. Th. 1.2 cm |
| 51. Whetstone of red sandstone with suspension-hole | 56. Small rectangular piece of flamy, honey-yellow and semi-transparent stone, with "oily" surface. (Same material in a few other yellow beads of the collections.) $21 \times 17 \times 10$ mm |
| 52-53. Two frs. of whetstones of slate | 57-58. Two pieces of flint, no. 58 dark red |
| 54. Rounded fragm. of whetstone with excentric hole, prob. the original one of the whetstone. Sinker for net? Diam. 4.5 cm | |

Site K 778

This group of ancient structures is situated about 2 km SSW of the enclosure K 749 (Dzun-khure) and fits rather well into the general line of fortified buildings, beginning with Fort 30 and ending with Tower A 15. The compound consists of four structures, two of which are recognizable as towers or bastions, the other two being totally destroyed and reduced to mounds. In Bergman's opinion all four buildings are in some way connected with each other, and it is possible that they form parts of a rectangular enclosure with corner bastions and an eastern gate. Tower A measures 5×5 m and is more than 2 m high; like the other buildings it is built of "block" bricks. The two mounds at B (gate bastions ?) have also contained small bricks besides "block" bricks, and their height has exceeded 2 m. Tower C is situated on a *yardang* and close to a thin wall made of small bricks, the latter being possibly the remains of a house. The finds were made by Chin from Tower C or rather picked up from its base. The ground-plan of this site is seen in Fig. 68.

K. 13778:

- | | |
|---|---|
| 1. Copper coin, <i>Chī-tao-yüan-pao</i> (995—98). Diam. 25 mm | 5. A few bronze fragments |
| 2. Fragn. of copper coin with illegible legend | 6. Small piece of white, pierced stone |
| 3. Fragn. of nearly D-shaped strap-holder of bronze | 7. Small flat bead of cornelian |
| 4. Small fragm. of flat bronze ornamental object | 8. Fragn. of ring-shaped bead of green glass. Diam. 11 mm |
| | 9. Fragn. of spool-shaped bead of transparent chalcedony |

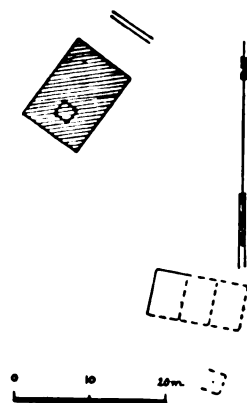


Fig. 69. Plan of the ruined structures 68.

- | | |
|--|---|
| 10. Well-ground pellet of brown chalcedony or agate. Diam. 15 mm | stoneware vessel, Ts'i-chou ware, with floral pattern in sgraffito with mottled green-brown glaze. The inside wholly covered with the same glaze. Reddish yellow body |
| 11. Small pellet of cornelian, not ground | |
| 12-13. Two small pellets of cornelian or agate. Pl. 30:2 | 21. Small light grey potsherd with crossing cord-impressions |
| 14-18. Five pieces of flint | 22-23. One complete and one half spindle-whorl made of grey potsherds |
| 19. Large piece of fairly large stoneware vessel, Ts'i-chou ware, with white-yellow transparent glaze covering painted brown designs. The inside partly glazed in brown. Light grey body | 24-25. Two round, grey potsherds |
| 20. Piece from neck of fairly small, thin-walled | 26-29. Four frs. of whetstones, three of which have a suspension-hole |

House 67 is rather insignificant in size. It is in poor condition. Close to the ruin a threshing-stone was seen.

Ruins 68. The ground-plan of this compound of ancient remains is shown in Fig. 69. They consist of one rather small house with three rooms, one small structure with a pole at the centre, and the remains of what seems to have been a watch-tower of rather singular form, facing a narrow mud wall. The almost totally decayed "tower", which measures 2×2 m at the base, is placed at one end of a 2 m high platform of stamped clay, 12 m long and 8.5 m broad. The direction of this structure is $N 35^\circ E$, i.e. the same as that of the line of the other towers and forts between Fort 30 and Tower A 15, a line into which this actual building fits rather well.

Stupa 69 starts the 7th consecutive row of ruins on the map. Its main part has collapsed, and it is situated on a large terrace, near the western slope of the latter.

Ruined Monastery K 779

Between two canals which run parallel to each other at a distance of 150 m, there stands a large ruined monastery or temple establishment from Khara-khoto times, which is now called Khara-baishing. The actual temple building, locality A, lies inside a rectangular enclosure of stamped clay, which measures c. 55×63 m and also contains some ruined houses. An inner enclosure, remains of which can be traced south and east of the first one, surrounds a few more house ruins and the base of a large circular stupa which is cut by the clay rampart. Finally, there are some ruined houses and ruin heaps south of the two enclosures. All the ruined houses are of sun-dried

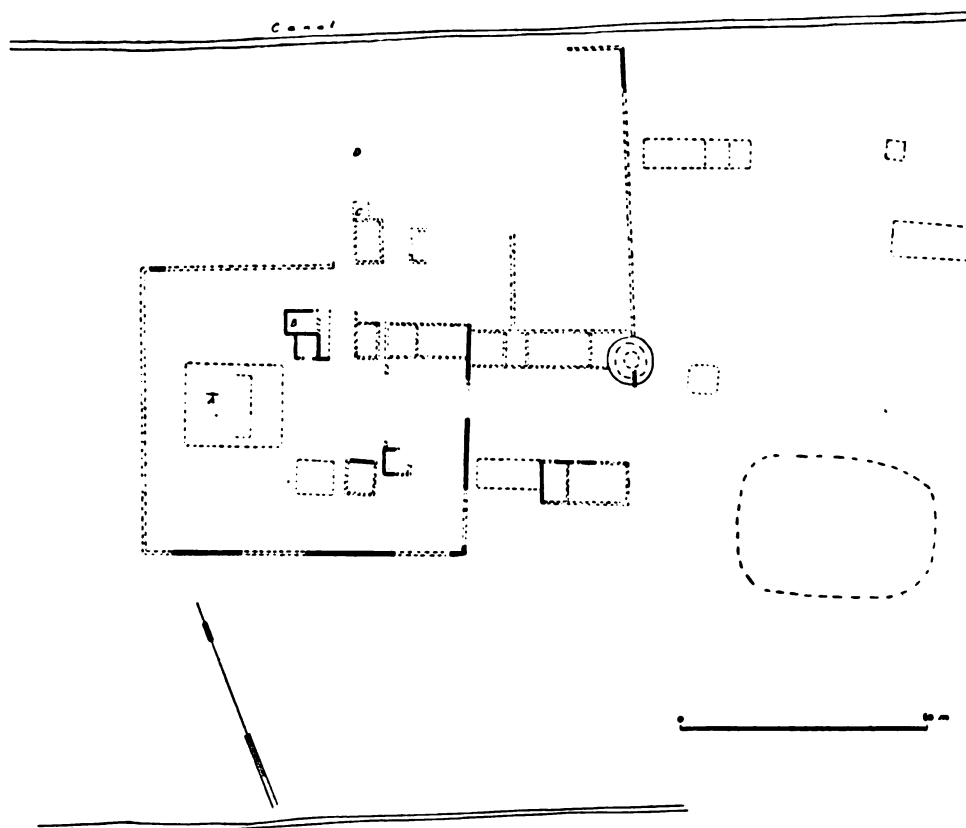


Fig. 70. Plan of the ruined temple establishment K 779 (Khara-baishing).

or burnt bricks of rather large size, almost like those of the Han towers but thicker, so-called "block" bricks. They are arranged in different kinds of bond. The plan is shown in Fig. 70.

In the main temple, locality A, the excavated northern inner wall is ornamented with paintings, but these are in such a poor state of preservation that no clear idea can be gained as to their content. The painting was executed in red, blue, green and white. The temple walls are of burnt clay coated with plaster. Some small polychrome clay reliefs, K. 13779:95—100, were probably fixed on one wall. An inner wall encircles a pole with traces of red lacquer upon its base. A vaulted capital of wood painted black, some fragments of boards with black, white, red, blue and green painting (K. 13779:90—94), and some pieces of green-glazed roofing-tiles, one of which is a dragon-head spout (not included in the collection), were also discovered and constitute the only decorative structural details resulting from Bergman's excavation of the temple. In all probability the temple buildings had already been stripped of their treasures by Warner, Kozlov and possibly Stein.

The bulk of the collection (K. 13779:1—87) consisted of surface finds from different parts of the establishment, where the ground was strewn with potsherds of glazed ware and porcelain; both inside and outside the area lay hand-querns and threshing-rollers. All these stones are hewn from a light, rough-grained granite, which must have come from quite distant parts. Further, pieces of vaulted, oblong roofing-tiles lay here and there between the houses.

The remainder of the finds in the collection derive from the localities A—D, and Chen's small

collection of stucco reliefs may also originate from one of these, probably from the temple (A). The Chinese scientist collected his objects (K. 13779:117—124) on September 13, 1932, nearly two years after Bergman's excavations at Khara-baishing. According to Chen's note the objects are from "an old temple 10 li E of Tsondol"; Bergman has concluded that this must be Khara-baishing, which is situated 10 li SE of Tsondol.

Among the more remarkable finds mention may be made of some fragments of Chinese MSS on paper and several Si-Hia prints, all uncovered in locality C; as far as is known these texts have not yet been published. The few coins are from the 10th and 11th centuries.

<i>Tabulated summary of antiquities:</i>		Approx. number of items
Coins		5
Copper, bronze, brass		
ornamented charm disc		1
fr. bronze cymbal		1
various objects or frs.		4
Iron		
arrow-head		1
key of lock		1
various objects or frs.		7
Stone		
spindle-whorls		2
beads		2
piece of flint		1
Pottery		
frs. of vessels		75
end-tile of roof		1
stucco reliefs		12
earthenware lion's head		1
Wooden		
small sculpture of lion		1
ornaments, painted or carved		2
double-bracket capital		1
cover of jar		1
comb		1
various objects or frs.		5
Textiles (silk, cotton), groups		2

List of antiquities:

K. 13779:

1. Copper coin, *Yüan-feng-t'ung-pao* (1078—86). Diam. 23 mm
2. Fragm. of copper coin, a -*yüan-(pao)* type
3. Round brass disc with central hole, with low, worn relief pattern representing the Twelve Terrestrial Branches in the shape of symbolic animals on one side, and on the other side a scene with a tall seated man, in front of whom there is a crane and a child, and behind whom there is a tree. Inside the circle with the symbolic animals there is first a circle with meanders, and then a circle with the names of the animals. Diam. 5.7 cm; Th. 2.5 mm. Pl. 31:3
4. Fairly large piece of bronze wire, thickening towards one end, the other end bent twice. L. 14.5 cm
5. Fragm. of bronze band, one end rounded and shaped like a bowl. Br. 0.9 cm
6. Fragm. of curved bronze rod, 9×4.5 mm in section
7. Piece from rim of container or fitting made of bronze sheet, with folded rim
8. Small piece of rectangular iron bar with square section, poss. raw material for trading. (36)×10×10 mm
9. Spool-shaped bead of yellow-brown chalcedony. Pl. 30:20
10. Small piece of flat ornament of transparent chalcedony, one side pierced by a V-shaped hole, the other side with two broad grooves
11. Piece of flint, prob. used for fire-making
12. Fragm. of spindle-whorl of green slate
13. Lower part of small earthenware stem-cup with solid foot, of same shape as Pl. 20:3, poss. used as a lamp. Light grey paste
14. Fragm. of rough, unglazed stoneware vessel, possibly steamer as indicated by a large, round hole. Paste grey at middle turning into blue-grey towards the surfaces; well levigated; hardness Mohs 6.0
- 15-16. Two pieces, one from everted rim, of porcelain cup, prob. stem cup, underglaze blue decoration. Outside, portion of large-sized duck snapping off a spray. Inside, freely drawn classic scroll around rim, and, in cavetto, dragon painted in slip under the glaze (*an hua* decoration). —: 15 Pl. 28:8 (inside) and 29:20 (outside)
17. Piece from lower part of porcelain cup, prob. stem cup, blue decoration. Outside, portion of dragon's leg in pale blue (type as in —: 801:15, Pl. 27:3). In cavetto, portion of four-clawed dragon painted in slip (*an hua* decoration)
18. Very small piece of porcelain cup, poss. stem cup, blue decoration. Outside, part of pine (?) design in pale blue. Inside, traces of bordering line; in cavetto, traces of low relief design painted in slip, possibly representing a dragon (*an hua* decoration)
19. Piece of porcelain cup, poss. stem cup, blue decoration. Outside, portion of dragon (type as on Pl. 27:3) and flaming jewel above bordering line
20. Ditto, design of dragon and flaming jewel as in —: 19 but drawn in different style and tone
21. Piece from rim with slightly everted lip of porcelain bowl, blue decoration. Outside, fairly large lotus scroll below bordering line. Inside, chrysanthemum scroll of same size below a line. The cobalt has run in firing. Diam. of mouth has been c. 16 cm
22. Piece from rim with everted lip of porcelain cup, blue decoration. Outside, large lotus flower-cup below double line around rim. Inside, crape myrtle wreath between line and double line around rim. Pl. 29:16
23. Piece from bottom of porcelain bowl, blue decoration. Outside, traces of lower bordering line. Inside, traces of centred floral (?) design within a circle. Painted in pale blue
24. Piece from bottom of porcelain bowl, blue decoration. Outside, traces of lotus panels. Centred inside, rear portion of a duck, and portion of spray with lotus leaf. Pl. 29:23
25. Small piece from bottom of porcelain bowl, blue decoration. Outside, portion of powerfully drawn lotus panel (the small circle of which is filled up). Centred inside, portion of plant spray with cobalt partly run in firing
26. Small piece of porcelain bowl, blue decoration. Outside, unidentified angular design (part of head-dress?). Inside, traces of plant design. Pl. 29:14
27. Very small piece of porcelain bowl, blue decoration. Outside, top portion of lotus panel. Inside, leaves below double line. Pl. 29:9
28. Small piece of porcelain bowl, blue decoration. Outside, portion of lotus panel with filled up circle. Inside, prob. plant spray. (Similar in size and decoration to —: 812:1)
- 29-41. Thirteen pieces of two or more porcelain vessels of large dimensions (prob. *kuan* and *mei-p'ing* types), blue decoration. No. 41 is a small fr. from chamfered rim with classic scroll on outside, the glaze pale blue and stained as a result of cobalt run in firing. No. 40 is from base of neck of another vessel and shows border of classic scroll — as shown by other frs. connected with No. 40 this border runs close to and above main shoulder pattern. The latter (see Pl. 29:12) consists of cloud-collars enclosing chrysanthemum scrolls (cf. Pl. 39 a,

- Pope 1952), and, between the cloud-collar frames, floral sprays (lotus?) with highly stylized leaves (cf. Pl. 29, Pope 1952). Middle part of body shows large peony scroll separated from cloud-collars by double bordering line (see Pl. 29:21; cf. Pl. 29, Pope 1952). Most pieces show orange biscuit where exposed. —: 29 Pl. 29: 12, —: 32 Pl. 29: 21
42. Part of small dish of Ying-ts'ing ware, the thin, white-green glaze not covering the actual rim. Radial and shallow grooves on both sides, ending below the everted rim. Glued together from three pieces. Diam. of mouth 11.7, of base 4.2. H. 2.5 cm. Fig. 61: 2
 43. Two pieces, matching each other, of fairly small porcelain dish with pale bluish white glaze, Shu-fu ware; on inside floral pattern in low relief. Diam. has been 13.5 cm. Pl. 26: 4
 - 44-49. Six pieces from rim of thin-walled Ying-ts'ing cups or dishes. Two of the pieces have incised pattern
 50. Piece of stoneware cup, Ying-ts'ing ware, with incised ornaments
 51. Piece of Ying-ts'ing cup, in cavetto leg of a dragon in relief. Pl. 25: 12
 - 52-53. Two frs. from high foot or neck of two Ying-ts'ing cups
 - 54-60. Seven pieces of celadon and (No. 57) Ying-ts'ing bowls with olive-green or pale green glazes. Some of them have slender, incised ornaments
 61. Piece from rim of celadon foot of bowl with the pale green glaze on outside only
 - 62-63. Two small pieces from rim of stoneware cup with dark green glaze, probably early Ming Dynasty
 - 64-67. Four pieces of stoneware bowls, Kün ware, with blue and green-blue glaze
 68. Piece of fairly large stoneware vessel, Ts'i-chou ware, with vigorous underglaze ornaments in dark grey, in which complementing lines have been incised. The inside is brown-glazed, and the body is white-yellow
 69. Piece of Ts'i-chou vessel with olive-green glaze and sgraffito ornaments
 70. Piece of Ts'i-chou vessel with dark brown, thick glaze and sgraffito ornaments on the outside, the inside having thin white-yellow glaze
 - 71-75. Five pieces of prob. two rather large stoneware vessels, Ts'i-chou ware, with dark brown glaze and vigorous leaf designs in sgraffito. The inside carelessly glazed in brown. Thick buff body. Nos. 73 and 75 have been glued together from two smaller pieces
 76. Two pieces, matching each other, of rather large Ts'i-chou vessel. White-yellow transparent glaze covers painted brown designs. The inside wholly covered with brown glaze on yellowish red and rather sandy body. Pl. 22: 15
 77. Piece of Ts'i-chou vessel with transparent glaze and painted brown underglaze decoration
 78. Piece of large thick-walled Ts'i-chou vessel with crackled transparent yellowish glaze on the white slip on outside, and thin, brown glaze on the inside which is made foliate by close, horizontal furrows. Unique in the collections
 - 79-80. Two handles of stoneware pots with brown glaze. Form similar to K. 13769: 29
 - 81-82. Two pieces from rim of stoneware bowls with dark brown glaze
 - 83-85. Three pieces from rim of stoneware bowls with poor, green-grey glaze
 86. Small piece of stoneware vessel, prob. Ts'i-chou ware, with transparent glaze covering painted designs in light brown on the outside, the inside having pale green transparent glaze
 87. Piece from flat end-tile of roof of foliate outline, glazed in green (lead-silicate) and with raised foliage decoration

Locality A (temple)

88. Iron bar, narrowing towards one end. L. 14.4 cm
89. Fragm. of whetstone (?) of soft slate
- 90-91. Two pieces of wooden boards with chamfered ends, which have been fitted into rabbets. Painted in red lead. 14 × 6 × 1.5 cm
92. Smallish piece of large, flat wooden ornament, carved on one side, and painted in green with black stripes. Th. 2.6 cm
93. Wooden double-bracket capital with deep, rectangular notch at middle; chamfered edges. One side painted in black except around the notch. 35 × 10.8 × 5 cm
94. Fragm. of painted board which has been part of larger structure. The painting occurs on both sides, and is in black, white, red, blue and green, the two latter colours being on the back only. The designs within the framing border are hardly visible, but may have been flowers. Br. 20.5. Th. at top end 1, at broken-off base end 1.5 cm
95. Painted clay relief plate, rectangular with top end curved, which has been attached to a wall. Representing a seated Buddha figure placed on a blue-painted lotus-cup. Blue aureole and gilt halo. The background painted in dark red. The tight-fitting robe leaves the right shoulder bare, and is painted in dark red, while the shade of the skin is gold. The hands are held in the position of *Dhyana mūdra*.

10 × 7.5 cm; Th. of ground plate 4—5 mm, of plate includ. the relief 19 mm

96. Ditto, less well-preserved, the paint nearly obliterated. The hands in the position of *Dhyana mūdra*
97. Ditto, with rather well-preserved painting, the same hand position as in no. 96
98. Fragm. of ditto with almost totally obliterated painting. Hand position of *Abhaya mūdra*
- 99-100. Frs. of two clay relief plates of the same kind as the preceding ones

Locality B

101. Copper coin, *Yüan-feng-t'ung-pao* (1078—86). Diam. 30 mm
102. Ditto with "grass character" writing and nearly plain back. Diam. 24 mm
103. Copper coin, *Ch'un-hua-yüan-pao* (990—95). Diam. 25 mm
104. Iron arrow-head with flat blade, which has concave, wide fore-end. L. 6.8. L. of tang 3.7. Br. 1.9 cm. Pl. 36:3
105. Iron key of lock, consisting of a bar with rectangular section; at one end this is bent up to a loop resembling a bird's head and at the other end bent at right angles. The latter end is wide and notched in one narrow-side. L. 14 cm. Pl. 38:22
106. Iron ring, rectangular section with rounded edges. Diam. 3.3 cm; section 3.5 × 3.5 mm
107. Fragm. of iron cutting implement, possibly material for knife with ring-shaped handle, with thick back end. L. c. 17. Br. 1.4—1.9 cm. Pl. 37:9
- 108-109. Two frs. of iron tool or perhaps sword, strongly rusted and weathered. L. of both frs. (28). Br. c. 2.5 cm; Th. 7—10 mm along the middle
110. Turned wooden, cylindrical cover of jar, with top knob and painted in black, red and gold in radiating segments. Diam. 7.2. H. 5.6 cm. Pl. 39:3
- 111a. 1-8. Fragments of silk and cotton cloth
 1. Two frs. of nearly white silk rep, one with selvage. Cl. 42—40 × 16
 2. Fragm. of dark old-rose to brick-red taffeta. Cl. 25—22 × 22—18
 3. Strip of pale rose silk rep. Warp of unthrown threads, weft of double z-sp. threads. Cl. 50 × 34
 4. Strip of faded red silk fabric intermediate between taffeta and rep. Folded at angles, the corner being secured with white z-tw. sewing-silk. L. 30 cm. W. 1.1 cm. Cl. 40—34 × 24

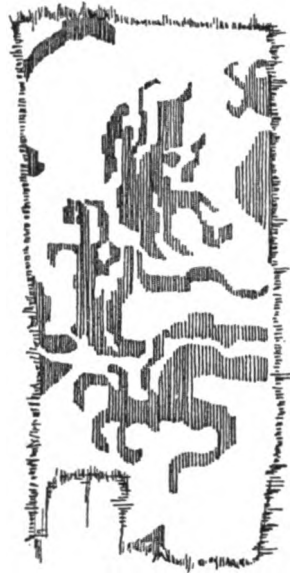


Fig. 71. Fragment of figured silk damask, K. 13779: 111 a. 6. Nat. size.

5. Two frs. of natural silk fabric in 3-heddled warp twill (2—1), one piece sewn on to the other, larger piece. The latter is hemmed at one side, the patch having tucked-in edges. The seams are sewn with natural s-tw. z-sp. sewing-silk. Cl. 70 × 44
6. Fragm. of natural (?) silk damask in 3-heddled twill (2—1), the pattern being indistinct. Cl. 76—72 × 48—42. Fig. 71
7. Fragm. of white cotton cloth, warp and weft of z-sp. threads of irregular thickness. Cl. 16 × 13
8. Ditto. Cl. 18—16 × 12
- 111b. A few pieces of leather, including a small, well-preserved pouch of chamois, which has contained some kind of whitish powder; its edges are seamed with 2-ply, yellow yarn, and its size is about 6 × 5.5 cm

Locality C

P. 487:

1. Wooden implement of uncertain use (frame for cymbal?), consisting of two long, oval sticks parallel to each other, attached by means of two short, wooden pegs, which are stuck by pivots into corresponding holes in one end of the longer sticks. One of the shorter pegs has round section, the other peg is flat, and both pegs can be turned round; at each end of the pegs there is a hole right through. Unique. L. 33.5 cm
2. Small wooden object, with rectangular grooves at flat back and narrow openings through the narrow-

sides of the shorter ends. The front is vaulted and plain, the general outline nearly oval. Unique. $4 \times 3.7 \times 1.5$ cm. Fig. 5: 9

Locality D

K. 13779:

112. Central part of fairly large bronze cymbal, which has had a large knob with curved side. Diam. of knob c. 8 cm, Th. of material 1—2 mm
113. Fragm. of iron plate, very rusty. Th. 0.5—1 mm
114. 1-5. Frs. of taffeta and cotton threads
 1. Two frs. of ragged natural taffeta-like silk fabric. Cl. $36 \times 25-20$
 2. Fragm. of natural taffeta, partly rep-like. Hem fold at one edge with stitching marks. Cl. $40-27 \times 26-22$
 3. Strip of yellowish, partly rose-flecked taffeta, with selvage at one short end. L. 14 cm. W. 1.5 cm. Cl. 34×27
 4. Fragm. of sash of two different kinds of taffeta strips, tied together into a firm knot. Main strip of pale greyish green shade, gathered lengthwise, with selvage on one edge, folded and sewn with yellowish white s-tw. z-sp. sewing-silk. Short strip loosely woven and of natural shade. L. 21.5 cm. W. c. 5 cm. Cl. 44×30 and 35×35 resp.
 5. Fragm. of white s-tw. z-sp. cotton thread. Th. 0.15 cm
115. Fragm. of wooden comb of Khara-khoto type with broad, curved back. Well-polished, and made of light brown, rather hard wood. Teeth of medium thickness. H. c. 5.5. Th. 0.9 cm
116. Short wooden tablet, poss. label with one end pointed and with a small hole. One broad-side has two longitudinal cut grooves. $7.8 \times 2 \times 0.6$ cm. Pl. 40: 5

Finds made by Chen in 1932

117. Painted stucco relief representing a winged human figure, which has been attached to a

Tati K 780 is situated on clay about 1 km ESE of Khara-baishing and was not visited by Bergman himself.

K. 13780:

1. Small fragm. of bronze bell or other cylindrical object, with relief ornaments, including a gorgon mask. The preserved part of the vertical side is straight; the top seems to have been vaulted. Diam. 4.8 cm; Th. 1 mm. Fig. 00, and Pl. 32:11
2. Small ring of bronze wire
3. Various bronze pieces, mainly refuse from casting
4. Fragm. of fairly large ring-shaped bead with vertical grooves, of blue glass. Pl. 30: 12
5. Half of spindle-whorl made of black-glazed stoneware. Flat under-side, semi-circular top-side with deep grooves. Diam. 3. Th. 2 cm
6. Small piece from rim of stoneware bowl, Kün ware, with light green-blue glaze
7. Small piece from rim of stoneware dish or low bowl, Ts'i-chou ware with borders of green, yellow and white enamel glazes in cavetto. Buff body
8. Piece of white chalcedony

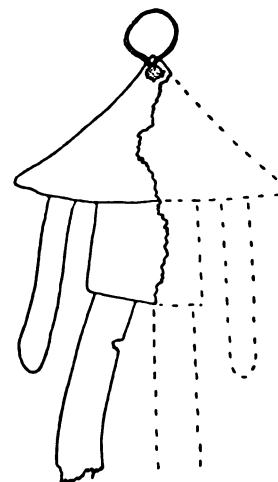


Fig. 72. Sketch of the small *tankha* of silk gauze, K. 13779: 119. (Omitted: indistinct traces of a gold pattern, and Si-Hia text in black ink.) Half size.

flat surface. Main body painted in white, with large wing painted in green, red, blue and gold, and a vigorously shaped "creeper" which is gilded and projects to the left of and behind the wing. Back of head is hollow. L. c. 15 cm. Pl. 21: 13

118. Small human head from same kind of relief as no. 117. The back is hollow

119. Small *tankha* of brown silk gauze; stamped pattern in gold and black Si-Hia text. Fig. 72

- 120-122. Three small relief ornaments of clay with traces of gilding. Back of no. 121 is hollow

123. Earthenware lion's head, gilded and with a blue-painted ball in the mouth

124. Small wooden figure, representing a recumbent lion with right paw resting on a ball. Light wood, painted blue. The back view of the animal is somewhat less elaborately carved. L. 6.2 cm. Pl. 40: 3

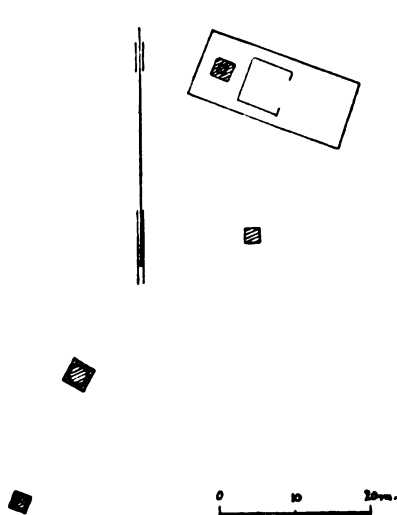


Fig. 73. Plan of the ruined temple 73, with *stupas* of different kinds.

House 70 is shown in Fig. 44. It is situated on a low *yandang* with clay ground on all four sides. The house, which has had several rooms, is built of "block" bricks and is partly eroded away.

House 71 is built of thin bricks, and its ground-plan is shown in Fig. 44. Some quern-stones were lying around the ruin.

Watch-tower 72 is built of stamped clay and measures 3×4 m, H. 3 m. Bergman saw "K.K." pottery on the ground but none of it was collected.

House K 781 starts the 8th consecutive row on the map and consists of rather insignificant remains. In size it is about 4×5 m, with traces of an outer room adjoining on one side.

K. 13781:

1. Fragm. from rim of largish bronze pot. The rim is broad, grooved and everted at an obtuse, almost right angle. Outer surface smooth and inner one even smoother except that three horizontal raised lines run a short distance below the rim. Diam. has prob. exceeded 50 cm; Th. 2.5 mm. Pl. 36: 17
2. Bronze band with one end pointed. L. 9.5. Br. 0.7—0.8 cm; Th. 1 mm
3. Piece of bronze plate, partly folded around iron lump
4. Bronze lump from casting
- 5-6. Two frs. of spindle-whorls made of potsherds
7. Rounded dark grey potsherd

Temple 73 is shown in Fig. 73. No detailed description was given by Bergman, except that the squares on the plan indicate stupas, four of which are situated outside the temple building and the fifth inside the walls. All stupas were found broken up, probably by the Kozlov expedition, as is also the case with other stupas in the neighbourhood of this place. The topography of this plain SE of Khara-baishing is characterized by black gravel, surrounded by spots with high tamarisks together with drift-sand. Traces of fields, many canals and quantities of quern- and threshing-stones show that this region was once well cultivated ground, although the number of dwelling houses is less than one would expect. It may well be that the fields here were the property of the temples.

Stupa 74 is built of small bricks like most of the stupas, and is preserved only in its lower part.

House K 782 was not visited by Bergman personally.

K. 13782:

1. Copper coin, *Yüan-feng-t'ung-pao* (1078—86).
Diam. 26 mm
2. Copper coin, *T'ai-p'ing-t'ung-pao* (976—84).
Diam. 25 mm
3. Triangular bronze arrow-head of the common Han type, with a rather blunt point, a triangular depression on one side, rounded straight corners and possibly traces of iron tang. L. 27, W. of sides 10 mm
4. Fragm. of bronze strap-holding frame of belt-buckle or similar object, which was probably closed towards the fore part. Back is somewhat hollow. 24×9 mm

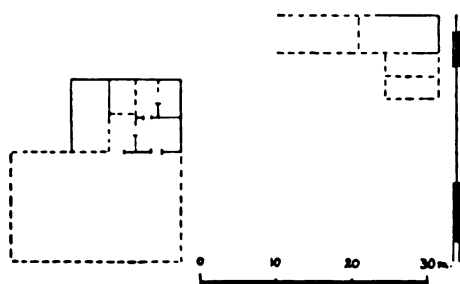


Fig. 74. Plan of the ruined houses 75.

5. Small bronze boss-shaped mounting with horizontally everted rim. Traces of two rivets or one loop at the back. Unique. Diam. 15. H. 7 mm. Pl. 32:3
6. Small oblong piece of bronze sheet with large rivet at each end. 29×7 mm
7. Short piece of bronze pin, broken off and bent at one end and also widening a little. L. (5.2) cm; Th. 4 mm
8. Piece of iron nail
9. Spool-shaped bead of blue glass with inlaid brown stripe. L. 12 mm. Pl. 30:19
10. Polygonal, irregular bead of agate or cornelian
11. Fragm. of hexagonal, spool-shaped bead of cornelian
12. Small pellet of cornelian, material for bead
13. Small piece of porcelain vessel, probably bowl, of "Feather-combed" ware, the marble effect caused by dark brown lamellae alternating with white ground-paste, all covered on both sides with thin, transparent glaze of high quality. Pattern consists of parallel, nearly vertical rows of upright petals. Gr. M. 16 mm. Pl. 23:14
14. Fragm. of whetstone with suspension-hole
15. Spout from smallish stoneware jug, brown-green glaze on buff body
- 16-19. Four pieces of flint

Houses 75 consist of two rather large house ruins with several rooms, the walls being built of large bricks. The walls of the bigger house are now more than 2 m high. Quern-stones and "K.K. pottery" were seen on the ground here, but nothing was collected. Plan, Fig. 74.

Watch-station K 783 consists of a small strongly built rectangular house or small fortress, measuring 7×9 m, height about 4 m (Plan in Fig. 44). The walls are of "block" bricks. The immediate surroundings consist of *yardangs*.

K. 13783:

1. Copper coin, *Yüan-feng-t'ung-pao* (1078—86).
Diam. 30 mm
2. Ditto, smaller and with legend written in "grass" characters. Diam. 24 mm
3. Fragm. of copper coin, prob. (*T'ien*)-*sheng-yüan*-(*pao*) (1023—32)
4. Fragm. of copper coin with -*yüan*- as a second character
5. Fragm. of large copper coin, prob. *Ta-kuan-t'ung-pao* (1107—11)
6. Large bronze end-fitting for canopy-rib, with bulb-shaped knob and strong hook. Well preserved. L. 7.2 cm. Diam. at open end 1 cm. Pl. 36:9
7. Bronze strap-mounting made of sheet. Nearly heart-shaped with rectangular strap-hole, and with 3 small rivet-holes. 2.7×2.4 cm. Pl. 34:15
8. Fragm. from side of small, bulging bronze vessel with indistinct decoration in very low relief beneath annular profiled border (prob. near missing rim). Pattern consists of scrolling designs between vertical lanceolate ribs. Th. of wall 1.25 mm
9. Various bronze pieces
10. Half of hexagonal, spool-shaped bead of amethyst-coloured glass
11. Ball-shaped bead of brown, white-striped chalcedony (?). Diam. 17 mm
12. Piece from rim of stoneware dish, "Northern celadon" ware, resembling Pl. 24:4

13. Two pieces matching each other, from bowl of porcelain stem-cup, early Ming (Süan Te?) celadon ware. Outside, mottled purple glaze, and inside, pale celadon glaze covering indistinct decoration in low relief. Unique type. Pl. 25: 13 shows the outside
14. Small piece of flat ring of white jade. Unique. Diam. has been 9.8. Br. 3. Th. 0.5 cm
- 15-16. Two smallish pieces of chalcedony
- 17-19. Three pieces of prob. one rough, unglazed stoneware vessel, decorated with "combed" small festoons, straight or wavy annular bands.
- Blue-grey, sand-tempered, rather porous paste with brownish, glossy surfaces; hardness Mohs 6.5
- 20-40. Eight complete and thirteen halves of spindle-whorls made of grey and red potsherds
- 41-45. Five small rounded potsherds, probably material for spindle-whorls
46. Piece of round spindle-whorl (?) of blue limestone
- 47-48. Frs. of two whetstones of slate, both with suspension-holes

Fortress 76 is only partially preserved, one side measuring 17 m in length, 3.5 m in width at the base, and 4 m in height. It is built of "block" bricks and oriented E—W. Bergman observed "K.K. pottery" on the ground here.

Houses 77 start the 9th consecutive row on the map. They are rather large and built of large bricks arranged horizontally in the one house ruin and vertically in the other. Some pieces of "porcelain", as well as a quern-stone, were seen on the ground.

House K 784 is made of "block" bricks and is thus rather well preserved; the remains were found on the top of a high *yardang*. The sketch-plan shows a small building, the size being about 6.5 × 3.5 m.

K. 13784:

1. Fragm. of copper coin, prob. *Hi-ning-yüan-(pao)* (1068—78)
2. Larger part of rectangular bronze or brass lock with engraved floral pattern on one broad-side. Both short-ends are open. Unique. 5.3 × 3.4 × 1.2 cm. Pl. 38: 20
3. Piece of bronze sheet with one rivet and a rivet-hole at one end (30) × 12 mm
- 4-5. Two frs. of spindle-whorls made of grey potsherds
6. Rounded grey potsherd
7. Piece of porcelain vessel, poss. double-gourd vase, with octagonal to round section, underglaze blue decoration. Outside, around bulging part (shoulder?) a variety of lotus panels (enclosed scroll similar to those in No. 2, PMB 1949) matching other panels with foliage scrolls (e.g. lotus, crape-myrtle) visible on the facets of body. Diam. at points of the lotus panels about 12.5 cm. Pl. 27: 6

Shrine 78 measures 6 × 10 m. Facing its northern short-side there stand two stupas similar to each other, and further northwards, at a distance of about 15 m, there are the hardly visible remains of a long, narrow house. The structures are built of sun-dried and burnt bricks (Plan in Fig. 44).

Locality 79, which is situated 280 m N 21° E of the temple, is either the remains of a house or a dam; 70 m further on in the same direction Bergman found a threshing-stone roller lying in a field, near to a canal.

Stupa with tati K 785 is situated among tamarisk cones halfway between Adune-khure and Dzunkhure. The base has been about 1.5 × 1.5 m, and its extant height is 1.7 m. The northern side of the base was dug from a tamarisk cone and showed the following ornamentation: white-painted surface which at its middle has a red-painted, depressed field with raised *kharoshti* writing in white at the same level as the white surface. Many *Si-Hia* MSS were found in this stupa, and the following fairly large collection of coins, small bronze objects, glass beads and pieces of porcelain was made from debris around the st

K. 13785:

1. Copper coin, *K'ai-yüan-t'ung-pao*. Diam. 25 mm
2. Fragm. of ditto
3. Copper coin, *Siang-fu-t'ung-pao* (1008—17). Diam. 25 mm
4. Copper coin, *Siang-fu-yüan-pao* (1008—17). Diam. 24 mm
5. Fragm. of copper coin, *Siang-fu*, either similar to no. 3 or 4
6. Copper coin, *Hi-ning-yüan-pao* (1068—78). Diam. 24 mm
7. Ditto, of the same diam.
- 8-9. Two copper coins, *Yüan-feng-t'ung-pao* (1078—86). Diam. 25 mm
10. Copper coin, *Yüan-yu-t'ung-pao* (1086—94). Diam. 24 mm
11. Copper coin, *Ch'ung-ning-chung-pao* (1102—07). Diam. 35 mm
12. Copper coin, *Ch'eng-ho-t'ung-pao* (1111—18). Diam. 25 mm
13. Fragm. of copper coin with broad rim, possibly (*Sheng*)-*sung-(yüan-pao)* (1101)
14. Fragm. of large copper coin with legend in high relief, of which a -*pao* is left. *Ch'ung-ning-t'ung-pao* (1102—07) or *Ta-kuan-t'ung-pao* (1107—11)?
15. Fragm. of copper coin, *Ch'i-(cheng-t'ung)-pao*, a Mongolian word on back dating it to 1356 A.D.
16. Bronze mounting for strap, nearly identical with Pl. 34: 16, the two rectangular openings being, however, smaller and the rivets preserved. A little vaulted. 2.5 × 2.7 cm; Th. at middle 3 mm
18. Bronze mounting for strap-end (?). The relief ornament of the somewhat vaulted front probably represents an ogre mask with high head-gear or crown. Back a little hollow and with two rivets. Unique. L. 2.9 cm. Pl. 32: 13
19. Fragm. of small bronze bell, hemispherical with top loop, which has been attached through a hole. Diam. has been c. 3.7, H. 1.9 cm
Pl. 33: 16
20. Two small pieces of pressed bronze sheet
21. Square piece of bronze sheet with a rivet in each corner. The rivets have large, flat heads. 2.5 × 2.5 cm
22. Fragm. of small six-lobular rosette-shaped bronze disc with central hole
23. Fragm. of bronze pin, poss. key of a lock, with one broken-off end flat and forked. L. (8.5) cm
24. Piece of bronze plate, bent up to a tube with triangular section
25. Various bronze pieces, mainly refuse from casting
26. Small, nearly flat iron ring, possibly ring-handle of knife. Diam. 2.7 cm; Th. c. 5 mm
- 27-28. Two frs. of blue glass beads
29. Piece of bead (?) of honey-yellow stone
30. Nearly cylindrical piece of honey-yellow stone
31. Button-shaped piece of blue, untransparent glass, possibly for finger-ring
32. Spherical spindle-whorl of stoneware with uneven, light brown glaze and deep vertical grooves. Diam. 3.3. H. 2.2 cm
33. Piece from rim of small porcelain cup, Ying-ts'ing type of ware, on glaze are attached enamel stripes, forming wavy patterns in brown and green. Pl. 25: 19
34. Piece from rim with slightly everted lip of porcelain bowl, underglaze blue decoration. Outside, border of thick foliage scrolls beneath double line around rim. Inside, wreath of crape-myrtle leaves (?) between line and double line around rim
35. Piece from lip of neck of porcelain vase (prob. yü-hu-ch'un type), blue decoration. On everted lip classic scroll sketchily drawn, beneath bordering line. Two holes for repairing bored from outer surface without going through glaze of inside. Diam. of lip about 8 cm

House 80 has now only one wall preserved, its length being 9 m. It is built of stamped clay and rises to a height of 2—3 m, and is situated at the edge of a cone. It begins the 10th consecutive row on the map.

Temple K 786 is the southernmost of its kind in the temple- and stupa-filled region north of Adune-khure. It consists of a large, rectangular brick enclosure, about 48 × 56 m, and preserved up to 3 m in height; at its northern corner there is the main temple building, facing two small stupas which stand outside the enclosure. The walls are built of "block" bricks. Inside the enclosing walls there are huge mounds of collapsed buildings, containing semi-cylindrical roof-tiles, which are burnt and partly glazed. Plan, see Fig. 44. Bergman led the excavation in person; only a few finds were gathered from this "good excavating locality".

K. 13786:

1. Fragm. of spherical bead of blue glass.
Diam. 12 mm
2. Small piece from rim of stoneware bowl with yellow-brown glaze and rather coarse, buff body
- 3-4. Two frs. of lobular end-plaques from roof; burnt of fine, light blue-grey clay and with scrolling designs in relief on front side. No. 4, Pl. 20:14
5. Larger portion of round roof plaque burnt of light blue-grey clay, showing moulded ogre mask. Diam. 10.5 cm. Pl. 21:8
- 6-11. Six frs. of stucco ornaments, which have been attached to images or temple walls, their backs being either flat or somewhat concave. (No. 6, cf. I.A., Pl. LV, K.K.I. 048; no. 7, cf. ditto, K.K.II. 0197.) Pl. 21:5, 10, 12
12. Piece of painted stucco from wall. Black edges framing white surface with naturalistic red flowers and green leaves, painted with vigorous strokes, now very indistinct. Th. 2.5 cm

House 81 is shown in Fig. 44. It is built of small bricks, of the same kind as those used in most stupas and in Khara-khoto. About 500 m to the north of it there is a large, rectangular artificially built pond.

House 82 is shown in Fig. 44.

Tati K 787 is the westernmost ruin in Erego-khara-burukh and it starts the 11th consecutive row on the map. It is situated west of a small tributary of the Etsina River and some hundred metres west of a couple of houses on the bank of the tributary.

K. 13787:

1. Fragm. of coin, *K'ai-yüan-(t'ung)-pao*, with thick brown desert patina
2. Five small bronze fragments
3. Piece from rim of stoneware bowl, "Northern celadon" ware. Rather thin body with glaze which does not cover the actual rim
- 4-7. Four pieces of different stoneware bowls, Kün ware, with blue and bluish purple glazes
8. Rounded piece of stoneware, buff body covered with brown glaze. Diam. 3.1 cm
9. Small brick-red potsherd
10. Piece of chalcedony

Tati K 788 is situated on the northern bank of the dried-up river, and constituted the last site of the northern part of Erego-khara-burukh.

K. 13788:

1. Piece of bronze sheet with two rivet-holes, possibly one end of lamina from coat of armour (?).
Th. 0.5 mm
2. Refuse piece from bronze casting
3. Fragm. of oval (D-shaped ?) ring with rectangular opening, made of thick shell. One side flat with well-cut inner edges, the other side somewhat vaulted and more simply cut. The size of opening about the same as in K. 13733:7. Pl. 33:14
4. Piece from rim of small porcelain cup, Ying-ts'ing ware, with attached leaf-designs in green and blue enamels. Pl. 25:18
5. Fragm. of spindle-whorl made of brick-red potsherd. Diam. 2.8 cm

Walled Enclosure and Fort K 789

This site, which is called Adune-khure (Stein's Adūna-kōra) or sometimes also Barun-khure, is situated about one kilometre south of the dried-up Etsina River. The river-bed may here, in the western and central parts of the Etsina Oasis, be regarded as the boundary line between the Erego-khara-burukh proper and the "Khara-khoto Zone".

The architectural remains are constructed in an extraordinary and somewhat puzzling way as they consist of an outer and an inner square, both of the same construction and state of preservation, giving no sign of originating from different periods though such an interpretation may be

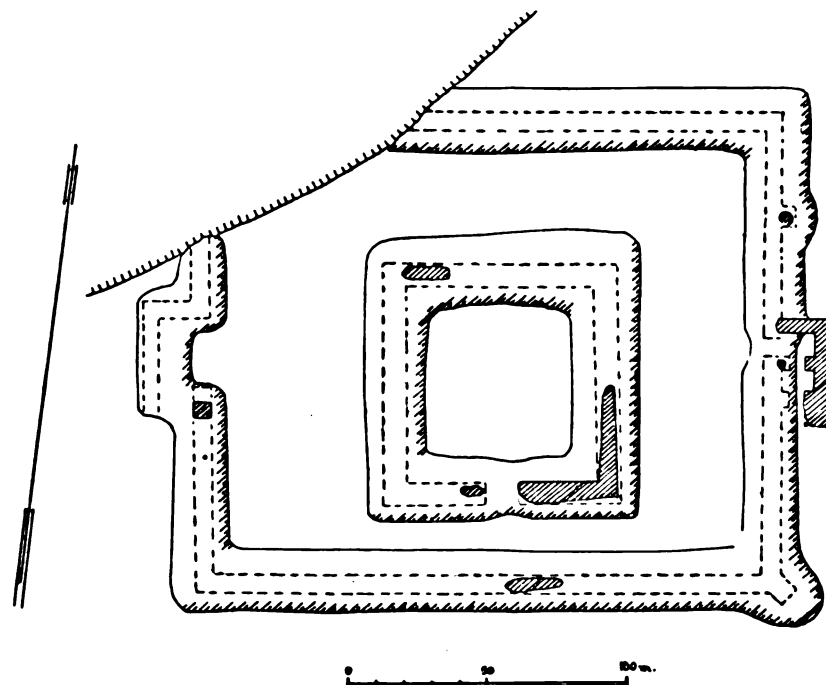


Fig. 75. Plan of the ruined stronghold K 789 (Adune-khure). Remains of houses found in the interior and outside the E wall are omitted.

arrived at from their different ground-plans. Most of the walls have decayed into mounds; only small parts of them are still standing at something approaching their original height (cf. plan, Fig. 75), e.g. the east gate of the outer enclosure, rising to a height of 9 m.

The outer enclosure is a rectangle with a fortified gate on the E and on the W face, and it is second in size to the town of Khara-khoto in the lower delta region of the Edsen-gol, measuring 208×173 m. The SE corner has been strengthened, and so has the part between the E gate and the NE corner. The NW corner has been cut away by erosion from a river-bed now long since dried up. The E gate is among the best preserved parts of the whole ruin; it has been possible to close this gatehouse in three places and it seems to have been provided with parapets. The construction of the other gatehouse has not yet been determined — Bergman did not have the means of carrying out the necessary excavation of the huge mound, and Stein totally overlooked it, as is seen from his plan on Pl. 16 in *Innermost Asia*.

The inner square, placed a little asymmetrically inside the rectangular enclosure, measures about 86×86 m, and has a gate in the middle part of the S face, as is the rule in Chinese buildings. The SE corner is best preserved, its masonry of stamped clay showing many holes from inserted wooden beams, a few of them still in place.

The remaining mounds of walls, left where the masonry has decayed, are about 20 m wide and 2—3 m high, the N wall of the outer enclosure being the lowest one.

Near the centre of the inner fort there was the hardly visible foundation of a small house built of burnt bricks, not shown on the plan. E and SE of the outer wall there must have stood several houses, now totally destroyed, and it looks as if they had once been surrounded by an irregular wall joining the NE outer corner of the town-like enclosure. Only a low mound remains of this

hypothetical wall, which has not been plotted on the plan. NE and E of the site there are many fallen trees, practically all of them overturned by western winds.

On the surface of the ground several small finds, pottery, porcelain, bronze, stone, etc., were collected, mainly outside the walls of the large enclosure. Especially by the above-mentioned house-group many small objects were found, and also fragments of quern-stones. There are plenty of flint pieces from both inside and outside the walls but not of Stone Age character (see nos. 52—54 in the list below); a few hundred metres SE of the site, however, there was found a stone axe-blade (see Maringer 1950, p. 150, and Pl. XXXVI:3).

The existence of *Wu-shu* coins among the T'ang and Sung coins may indicate an early date of construction of the inner structure, perhaps in Han times. Later the outer enclosure might have been added, and the fort at the same time repaired; the place may well have had some importance already in T'ang and Si-Hia times as "a place of refuge or halt for caravans, etc., moving by the Etsin-gol route" as was suggested by Stein (*I.A.* p. 436—37).

K. 13789:

1. *Wu-shu* coin. Diam. 25 mm
2. Fragn. of *Wu-(shu)* coin. Diam. 25 mm
3. *Wu-shu* coin without raised rim. Diam. 18 mm. Pl. 33:9
4. *K'ai-yüan* coin with thick verdigris
5. Copper coin, *T'ai-p'ing-t'ung-pao* (976—84). Diam. 24 mm
6. Copper coin, *Yüan-feng-t'ung-pao* (1078—86) with thick "desert" verdigris. Diam. 28 mm
7. Copper coin, *King-te-yüan-pao* (1004—08). Diam. 25 mm
8. Fragn. of copper coin, prob. *Yüan-feng-(t'ung-pao)* (1078—86)
9. Fragn. of copper coin of unknown type, with thick verdigris
10. D-shaped, double bronze mounting for strap-end with rectangular opening. The two plates are attached to each other by three rivets, the top plate being hollow at back with the edges slanting. 2.5×1.8 cm
11. Ditto, with four rivets, placed at the corners, the fore-end more evenly curved than it is in no. 10. 2.7×2 cm. Fig. 9:7
12. Fragn. of rectangular top-plate of double bronze mounting for strap-end with rectangular opening. Seems to have had 6 rivets, one in each corner and also at the inner corners of the opening. 2.6×2.9 cm
13. Bronze belt-ring broken in two pieces, with strap-mounting or -holder consisting of rectangular piece of bronze sheet bent up double and with the free ends held together by two rivets. Unique. 3×2.4 cm. Fig. 9:6, and Pl. 33:27
14. Fragn. of triangular bronze arrow-head, of the common Han type, only the point preserved. W. of sides has been 8 mm, thus unusually narrow

15. Small bronze nail or tack with round, bulbous head, which has a small central knob. Cast in one piece. L. 2.1 cm
16. Fragn. of flat bronze bar, ridged and tapering towards one (broken-off) end. Th. 3 mm along the ridge. Br. 6—9 mm
17. Smallish bronze staple, made of round pin with flattened and pointed ends, bent into a curve. W. 2.4 cm
18. Various small bronze pieces
- 19-20. Two biconical, hexagonal beads of agate. L. 21 mm
21. Short hexagonal bead of transparent glass (?) with polygonal edges. Diam. 10 mm. Fig. 76:2
22. Seven-sided, somewhat flat bead of cornelian. Diam. 10 mm
23. Small cylindrical piece of cornelian with unfinished holes at each short end. Material for bead



1



2

Fig. 76. Two ornaments of exceptional form, specimen 1 of glass, 2 of glass or crystal. Nat. size.
1. A. 8:1; 438, 2. K. 13789:21.

- 24-27. Four well-ground pellets of cornelian and agate. Diam. 8—22 mm. Pl. 30: 3
 28. Unground pellet of chalcedony. Diam. 20 mm. Pl. 30: 4
 29. Round, biconvex disc of cornelian, totally ground. Diam. 22. Th. 11 mm
 30. Small, round disc of cornelian, material for bead. Diam. 10 mm
 - 31-36. Six pieces from probably one stoneware dish, Northern celadon ware. On the outside incised lines, and on the inside traces of carved foliage designs
 37. Small piece of porcelain bowl or stem-cup, Ting ware
 - 38-40. Three thin pieces of porcelain vessels, Ying-ts'ing ware
 41. Small piece of ornamented stoneware vessel, Ts'i-chou ware, with thin transparent glaze over white slip on the outside, and thicker, brown glaze partly covering the inside. Underglaze decoration on outside consists of incised linear designs and small stamped rings below annular scorings, all depressions filled with brown paint or glaze. Light grey body. Gr. M. 3.8 cm. Pl. 22: 7
 42. Piece from rim of stoneware vessel with thin, transparent glaze on light grey body
 43. Fragg. of plain, unglazed stoneware vessel. Greyish brown, homogeneous, well levigated paste; hardness Mohs 5.5
 - 44-45. Two frs. of earthenware vessels. Grey, homogeneous, well levigated paste
 46. Fragg. of plain, unglazed stoneware. Blue-grey, homogeneous, well levigated paste; hardness Mohs. 5.5
 47. Fragg. from base of unglazed stoneware vase. Main part of disc-shaped under-side preserved, having the Chinese character *Kuan* incised in a rather bold, running style. Blue-grey, homogeneous, well levigated paste; hardness Mohs 7.0. Diam. of base c. 7.2 cm. Pl. 19: 5
 48. Small spindle-whorl made of potsherd
 49. Fragg. of grindstone of dark red sandstone, with three deep parallel grooves on one side, probably for grinding beads. The back is ground almost flat. Pl. 20: 16
 - 50-51. Two small pieces of black slag
 - 52-53. Two pieces of flint, a little retouched
 54. Group of nine small pieces of flint
 55. Group of ten frs. of iron objects, very rusty, and slag, etc. One piece of slag-like material, having a circular depression, may have been used for casting a round iron disc. Pl. 38: 7
 56. Small piece from wide stand of porcelain cup, poss. Ying-ts'ing ware. Traces of open-work decoration, prob. oval, five-lobular holes. Pl. 25: 10
 57. Fragg. of the profiled foot of a porcelain stem-cup, bone-white Ting ware. H. c. 2 cm
 - 58-63. Six pieces of very thin porcelain ware of the celadon type, light greenish shades, partly discoloured, some showing weak pattern of fine incised lines
 64. Rounded piece of white porcelain ware, poss. Ying-ts'ing
 65. Piece from side of porcelain bowl, underglaze blue decoration. Outside, border of foliage scrolls above portion of lotus panel. In cavetto, traces of crape-myrtle design, encircled by a single line
 66. Piece of stoneware dish, Northern celadon ware, with portion of stylized aquatic scene with fishes carved on the inside. Pl. 25: 5
 - 67-68. Two pieces of stoneware, Northern celadon ware
 - 69-71. Three pieces from rim of stoneware bowls, prob. celadon ware, thin glaze not covering the whole outer surface
 - 72-73. Two pieces of thin stoneware vessels, prob. bowls, with thin grey or yellowish glaze on buff body with white slip
 74. Fragg. of ring-shaped stoneware stand for bowl, rim almost horizontal, and c. 1.8 cm broad. Light grey body. May have had glaze ground off by the sand. Unique. Diam. 11 and 7 cm
 - 75-76. Two frs. from bottom of stoneware bowls, Ts'i-chou ware, ground-off yellow and brown glazes on grey body
 77. Fragg. of bottom of stoneware bowl, Ying-ts'ing ware, which has had light greenish glaze and some incised lines on the inner bottom surface. Typical Fukien profile of foot-ring
 - 78-79. Two pieces from rim of thin-walled stoneware bowls with dark, green-brown glaze on buff body
 80. Fragg. from neck of stoneware jar, Ts'i-chou ware, with blackish brown glaze on buff body
 81. Piece from rim of wide, thin-walled stoneware bowl with dark brown glaze on buff body
 82. Piece of thick stoneware with brown glaze, Ts'i-chou ware, with buff body
- P. 411:
1. Nearly oval, flat iron ring, possibly part of belt-ring or buckle. 3 × 2 cm
 2. Piece of bronze sheet with one edge curved. L. 2.5 cm
 3. Piece from rim of small bronze mirror. The rim is plain, 10 mm broad and 4 mm thick. Inside the rim there runs a raised cord-like ornamental line. Diam. has been 8 cm

Tati K 790 is situated about 500 m SW of Adune-khure, and is one of several *tatis* in this region NW of Khara-khoto.

K. 13790:

1. Triangular bronze arrow-head of the common Han type, with rather blunt point, rounded straight corners and traces of iron tang (?). L. 27, W. of sides 10 mm
2. Ditto with sharper edges and point, rounded straight corners and lump of verdigris at the base (from bronze tang ?). L. 24.5, W. of sides 8 mm
3. Ditto with blunt point, straight corners and large, 11 mm deep rectangular hole for tang. L. 27, W. of sides 10 mm
4. Ditto, strongly corroded and weathered, with triangular depression on one side, rounded straight corners and deep hole for tang. L. 29, W. of sides 10 mm
5. Top-plate of double bronze strap-end mounting, rectangular rear frame and triangular fore part; slanting edges of the top surface. Three rivets have joined this plate to the (missing) under-plate. A small pit at back, close to and inside each corner rivet, may have received the corresponding rivets of the under-plate. Size 21 × 15 mm. Pl. 34:7
6. Fragm. of flat, ridged bronze armlet, painted in green (lacquer ?) and with simple, ornamental notchings at one end perhaps representing head of a snake or dragon. Br. 6, Th. 2 mm
7. Round, button-like piece of blue-green glass, probably for finger-ring. Diam. 17, Th. 6 mm
8. Various bronze pieces, fragments and refuse from casting

Tati K 791 is the northernmost of the line of *tatis* of varying sizes which unites Adune-khure with the town of Khara-khoto. The collection, excavated by Chin, contains coins of both *Wu-shu*, T'ang or Sung types.

K. 13791:

- 1-2. Two *Wu-shu* coins. Diam. 25 and 24 mm. No. 2, Pl. 34:2
- 3-4. Two frs. of *Wu-shu* coins
- 5-7. Three *K'ai-yüan-t'ung-pao* coins. Diam. 23-24 mm
8. Small fragm. of copper coin, T'ang or Sung
9. Triangular bronze arrow-head, of the common Han type, with the corners cut straight and directed a little upwards. Lump of rust indicates iron tang, which may have been stuck into a long, thick bronze socket, projecting from the base end. L. 30, W. of sides 10 mm
10. Ditto with "desert" patina and with rather sharp edges, which seem to have been ground several times. The corners are straight and directed a little upwards, and at the base end there are traces of a bronze tang or tang-socket. L. 28, W. of sides 9 mm (originally wider sides)
11. Ditto with blunt point and edges, straight corners directed upwards, and with traces of bronze tang. On one side there is probably a triangular depression. L. 31, W. of sides 11 mm
12. Top-plate of D-shaped double bronze strap-end mounting with rectangular opening and three narrow rivets. Slanting edges. 26 × 16 mm
13. Ditto, a little larger but of the same shape, with three rather thick rivets. Slanting edges. 24 × 15 mm
14. Under-plate of D-shaped double bronze strap-end mounting. Narrow, rectangular opening and three rivets which are unusually thick, being 2 mm in diam. 24 × 18 mm
15. Piece of bronze pin with one end rounded and flattened, the other end cut to half its thickness and bent up. L. 6.8 cm
16. A few pieces of bronze sheet
17. Iron cross-guard of dagger or large knife, strongly weathered. Lanceolate outline, narrow rectangular longitudinal section with middle part depressed from both sides. The opening at middle seems to be triangular. 7 × 2.2 × 1.1 cm
18. Fragm. of very small stoneware bowl. Light grey body with dark brown glaze on the inside bottom surface. Diam. 6, H. 2.5 cm. Fig. 61:5
- 19-20. Two frs. of spindle-whorls made of grey potsherds
- 21-22. Two unground beads of cornelian, spherical
- 23-28. Six pieces of brown chalcedony and cornelian or agate, partly worked materials for beads. No. 25 is well ground and cylindrical, the last three specimens being small pellets. Pl. 30:1, 32

Tati K 792

K. 13792:

1. Fragm. of *Wu-shu* coin. Diam. 25 mm
2. Bronze belt-ring with rectangular strap-holder, cast in one piece. The ring is oval, its edges slanting outwards from both sides. The back frame is left open at middle of its inner side, thus leaving two square projections as inter-

- mediate part. (Cf. K. 13759: 6). 24×23 ,
Th. 2.5 mm
3. Bronze strap-end mounting with two hinge-like projections for holding belt-ring or clasp. Consists of 2 mm thick plate, the foremost edge straight, the longer edges narrowing towards the rounded back-end, which has two rivets. The edges bevelled on top-side. 4.2×3.4 cm. Pl. 34: 8
 4. Various pieces of bronze sheet
 - 5-8. Four iron pieces, frs. of larger objects
 9. Fragm. of earthenware net-sinker of B-type with longitudinal and crossing grooves. L. 4.5 cm
 10. Fragm. of rectangular whetstone of red sandstone, broken off across a suspension-hole. Th. 1. Br. c. 2.6 cm
 - 11-13. Three pieces of flint

Tati K 793. The finds were collected by Wang from a spot near a ruin, which is probably a house.

K. 13793:

- 1-2. Two *Wu-shu* coins. Diam. 27 and 25 mm
3. *Wu-shu* coin with a short, raised horizontal line at middle of the lower edge of the square hole. Diam. 25 mm
4. Fragm. of fairly large copper coin, with one indistinct character remaining. *Ch'ung-(ning-t'ung-pao)* (1102—07)?
5. Bronze arrow-head with two "wings" and (broken-off) socketed base part. Rhombic section, the wings extending successively from the broad-side ridges. The point is blunt. 3.4×1.9 cm. Pl. 33: 6
6. Oval bronze ring-handle of dagger or sword with triangular-sectioned socket for receiving the blade. Two irregularly placed pits on one side have probably served to hold precious stones. Unique. 3.5×5.2 cm; Th. 8—9 mm. Pl. 36: 4
7. Piece of bronze sheet, bent up to cylindrical shape. L. 6.5. Diam. 2 cm
8. Fragm. of strongly corroded, spherical iron sleigh-bell with split-up sides and bottom, and rectangular top projection, now broken off, which has served for suspension. L. of body c. 3.5. Diam. 2.8 cm
9. Fragm. of biconical, polygonal bead of agate
10. Small spool-shaped bead of blue glass
11. Fragm. of round, light brown disc of brickware, on one side with small portion of pattern in high relief, prob. representing an ogre mask. Diam. c. 14 cm
12. Brick-red potsherd richly tempered with grains of sand
13. Fragm. of spindle-whorl made of a potsherd
14. Fragm. of earthenware spool-shaped net-sinker of A-type
15. Piece of thin, unusually broad whetstone of slate
3. Copper coin, *Siang-fu-yüan-pao* (1008—17). Diam. 25 mm
4. Copper coin, *Yüan-feng-t'ung pao* (1078—86). Diam. 24 mm
5. Small oblong bronze ornamental mounting with open-work design which represents an ogre mask. The edges are lobular. Two rivet-holes, one in each end of the nearly triangular plate. Unique. L. 3.5 cm; Th. 2—3 mm. Pl. 32: 9
6. Fragm. of flat bronze strap-end mounting, which has been rectangular with triangular fore-end. Front a little elevated and back correspondingly hollow; three rivets in the latter. Unique. Br. 2.4 cm
7. Small square rosette-shaped piece of bronze sheet; front has bevelled edges. On back around central hole there is rust indicating nail or rivet. 1.4×1.4 cm
8. Weathered piece of iron rectangular in section (5×6 mm) and possibly lanceolate in outline. Arrowpoint? L. (3.8) cm
9. Spool-shaped bead of light blue glass
10. Spool-shaped, irregularly five-sided bead of light blue glass with white stripes
11. Fragm. of spherical, hexagonal bead of green glass. Diam. 9. H. 8 mm
12. Pellet of cornelian. Diam. 11 mm
13. Small piece of dark blue glass
14. Various bronze pieces, mainly refuse from casting
- 15-16. Two pieces, one from rim with slightly everted lip, of porcelain bowl, underglaze blue decoration. Outside, portions of large-sized lotus wreath between simple bordering lines. Inside, floral wreath between line and double line around rim. See —: 18 below
17. Piece from rim with everted lip of porcelain cup, prob. stem-cup, blue decoration. Outside, portion of chrysanthemum wreath below line around rim. Inside, classic scroll between line and double line around rim; in cavetto, traces of *an hua* decoration painted in slip. Painted in dull, partly pale, blue. Diam. of mouth c. 11 cm
18. Piece from lower part of prob. same bowl as —: 15—16. Outside, lotus panels; in cavetto,

Tati K 794

K. 13794:

1. *Wu-shu* (?) coin with thick verdigris
2. Copper coin, *Hi-ning-yüan-pao* (1068—78). Diam. 29 mm

portions of a head of a duck and prob. a conch shell

19. Piece from top part of small porcelain bottle, hexagonal with spherical hollow and low round neck, blue decoration. Outside, roughly drawn key-fret band around neck and indefinable blossoms and leaves on the sides below bevelled shoulder; the cobalt has run and blackened in firing. Inside of mouth glazed. Diam. of body (outer circumf.) 4.5 cm, of mouth 2.8 cm. Pl. 29: 5
20. Piece from rim of stoneware dish, celadon ware, similar to K. 13769: 21
21. Piece of stoneware vessel with crackled celadon glaze
22. Piece from rim of stoneware dish, Kün ware,

with glaze in several bluish shades and with a reddish purple spot. Grey body

- 23-26. Four pieces of different Kün bowls, dark blue and green-blue glazes. No. 26 has one reddish purple spot. Grey body
27. Piece from foliate rim of dish of brick-red ware, with remaining speckles of blue enamel. Pl. 20: 17
28. Leg (?) of earthenware vessel, almost turned into a spiral. A-paste. L. c. 11. Diam. c. 2 cm
- 29-32. Three complete and one fragmentary spindle-whorl made of potsherds
- 33-34. Two rounded potsherds of light grey ware. No. 33 with unfinished central hole
35. Fragm. of whetstone with a small suspension-hole near one end

Locality 83 terminates a waste area north of the house ruin, extending towards the central Eregokhara-burukh, thus roughly covering the "white spot" on the map where the former Etsina River disappears under high sand dunes. "Here and there are pieces of glazed pottery but not in any large quantities", comments Bergman on the field map he made during a tour round this region. No sherds were collected.

House K 795 is situated on the border of the elongated terrace on which the town is built.

K. 13795:

1. Copper coin with strong "desert" patina, *Siang-fu-yüan-pao* (1008—17). Diam. 23 mm.
2. Copper coin, *Hi-ning-yüan-pao* (1068—78). Diam. 25 mm
3. Fragm. of top-plate of double bronze strap-end mounting. Back-end with two rivets on the back and traces of rectangular opening. The edges bevelled on front. Br. 2.4 cm

4. Piece of bronze wire, round section, bent-up ends. Possibly part of or material for ear-pendant?
5. A few small pieces of bronze, mainly refuse from casting
6. Half of ring-shaped bead of blue glass. Diam. 13 mm
7. Small spindle-whorl made of grey potsherd. Diam. 2.4 cm
8. Piece of white chalcedony, a little retouched

Tati K 796 is situated below the terrace, on the top of which stands Stein's stupa K.K.IV.

K. 13796:

1. Fragm. of copper coin, *Hien-p'ing-yüan-(pao)*, (998—1000). Diam. 24 mm
2. Fragm. of ditto
3. Fragm. of copper coin with -*yüan-pao* as the two last characters of legend. Diam. 26 mm
4. Fragm. of copper coin with illegible legend
5. Bronze strap mounting with traces of (prob. oval) ring at middle of lower edge. Thick, pointed oval plate with partly perforated relief ornaments, probably representing an antelope standing amongst trees, bordered by notched line. The design is very indistinct as it is covered with dark green and light green verdigris. On back two broken-off loops for attaching to a strap. The plate is a little vaulted lengthwise. Unique. 6×4.2 cm. Th. $2\frac{1}{3}$ mm. Fig. 77
6. Various bronze pieces

7. Small socketed iron hoe- or axe-blade, rusty. The "socket" consists of two flaps bent up on one side. The blade widens towards the convex cutting-edge. L. 9, Br. of cutting-edge c. 5 cm. Fig. 67: 3, and Pl. 36: 25

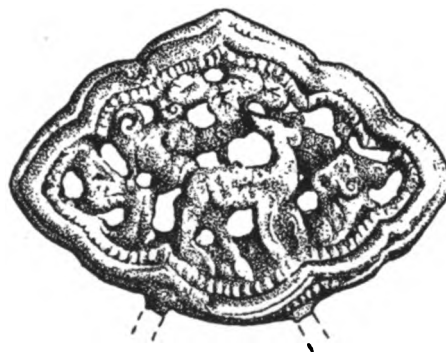


Fig. 77. Bronze strap mounting, K. 13796: 5. Thick green verdigris. Nat. size.

8. Ring-foot of porcelain stem-cup, Ting ware with thin, white glaze. H. 1.3 cm
9. Piece from rim of stoneware vessel with whitish yellow glaze on the outer surface and light grey glaze on the inside. Grey body
- 10-12. Three pieces from rim of stoneware bowls, Kün ware, with greenish blue, blue-grey and yellow-brown glazes. No. 12 has also a green stripe. Buff body
13. Piece from rim of a wide, thin-walled stoneware bowl with blackish brown glaze on white-yellow body
14. Spindle-whorl made of grey potsherd
15. Drop-shaped, flat piece of pale green glass. The surface is granulated

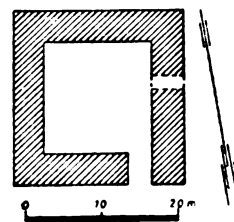


Fig. 78. Plan of the northern Ulan-durbeljin, Fort 84.

Fort 84

This massive little fortress, called Ulan-durbeljin or, according to Stein (*I.A.* p. 436), also Sokhato-köl,¹ is situated in the northern part of a flat gravel expanse between the Ikhen-gol and Khara-khoto, and more than 2.5 kilometres north of the main river-bed of the Etsina River.

The well-preserved fort is square, 22 × 23 m, with 7 m high walls built of bricks with a layer of reeds inserted after every third course (Stein gives six). At the base the walls are 4 m thick and at the top 2.8 m. The crest is provided with double, low parapets. The gate is in the SE corner; on the E side there is an opening in the wall which may originally have been a small gate, now enlarged by the collapse of bricks. The latter are, as Stein has pointed out, of the same size as those used in the Limes towers near Mao-mu, i.e. of Han size. This circumstance together with the general construction as well as the situation make it quite evident that this small fort dates from the Han period. The plan is shown in Fig. 78.

The excavations of both Stein and Bergman yielded no finds.

Watch-tower A 14

The first of the two watch-towers south of the previous fort — all three ruins forming a SW-NE line — was partly excavated. It has now become a smoothly rounded mound, only 2 m high and with a diam. of about 20 m.

In the centre there was a massive brick tower surrounded on the E and S sides by small, narrow rooms joined by passages, hardly more than 1 m broad. In the small alcove in the E wall a *k'ang* had been built (at A on the plan, Fig. 79), and under this most of the finds were made. The fragment of a rain-cloak made of grass was, however, found here at a depth of 30 cm beneath the mound surface and above the *k'ang*. From the alcove opposite to the one just mentioned a couple of steps formed the beginning of a staircase leading to the top of the tower. At "B" in the passage a rather large beam lay parallel to the wall; seal-impression in clay no. A. 14:19 was found here at a depth of 40 cm. The walls are partly whitewashed with a decoration of stripes painted in red and black, as is the case in several of the Han ruins. The diggings were carried down to a depth of 1.3 m at some places.

The collection mainly consists of wooden objects such as 7 *kien*, various parts of largish objects, pegs, prisms, fragm. of spatula, fragm. of oval bowl lacquered in black and red, black-lacquered

¹ This name should properly be rendered Sukhaite-köl, signifying "Depression with Tamarisks" and apparently referring to a river-like depression near the fort (Bergman).

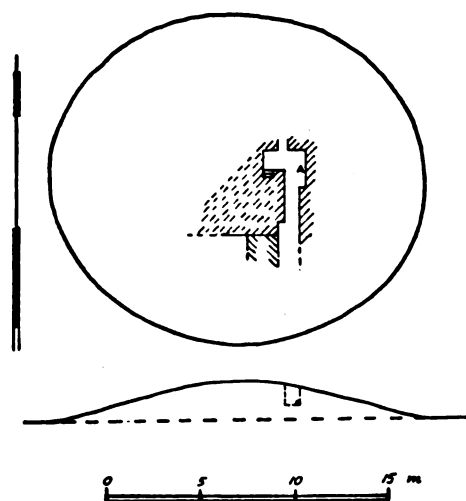


Fig. 79. Plan and section of Watch-tower A 14.
Most of the finds were made at A.

base part of arrow, etc.; further, fragments of bamboo and reed containers, small piece of bronze plate, which may derive from a coat of armour, fragm. of a seal-impression in clay, part of rain-cloak of grass, pieces of silk and veget. cloth, and strings. A few grey "Han potsherds" were observed but left at the place.

List of antiquities:

A: 14:

1. Long wooden peg, prob. bough of saxaul, with knob at one end. The latter has a notch around its middle and is pierced with a 2.5 cm deep and 3×4 mm square hole, into which an iron nail or point may have been driven. The actual bough has a flattened oval section near the knob and a round section towards the thick handle end. L. 37, diam. 1.4—2.2 cm. Pl. 11:7
2. Wedge-shaped wooden block with a thin rectangular dowel inserted in a hole 4 cm from the thicker end. Part of larger object. 27.3×4.8×3 cm
3. Nearly rectangular wooden block of tamarisk wood, roughly hewn and probably unfinished, with a nearly round, 3 cm deep hollow near one end. This hollow seems to have been worked in two stages: the unsymmetrical outline was made with a chisel and part of the bottom may have been turned, the diam. of this shallow depression being 3.5 cm. 23×8×4.3 cm
4. Wooden board, tapering towards one end, where it has a square hole and three notches in the edge. A round opening through the broader part, its diam. being 5—6 cm. 26.7×10.3×2 cm
5. Wooden stick with flattened oval section and chamfered edges on one side. Burnt at the middle part. 24.3×2.6×0.6 cm
6. Wooden "stationery" slat for writing. 22.9×1×0.3 cm
7. Round peg painted black, pointed at one end. L. 17, diam. 1.4 cm
8. Longitudinal fragment of plano-convex blade of wooden spatula. The free end is convex, the longer edges a little concave. 9.1×1.2 cm
9. Fragm. of a wooden slat with a notch at one end. 9.3×1×0.8 cm
10. Fragm. of a coarsely made peg which has had a rectangular hole straight through. L. 15.5, Diam. c. 3 cm
11. Small bamboo peg, somewhat pointed. 14.5×0.6 cm
12. Charred fragm. of bamboo cylinder, prob. used as a container. L. 10.5 cm
13. Two frs. of a ferrule of reed, prob. used as a container. L. 10.1, Diam. 1.3 cm
14. 1-9. Frs. of partly sewn silk (parts of clothes) in various shades of brown and in brick-red, silk wadding, veget. cloth, and cord of veget. fibre. No. 6 is a fragm. of light brown veget. cloth with a dragon-like figure in black Chinese ink stamped (?) on it. (See Sylwan 1949, p. 28)

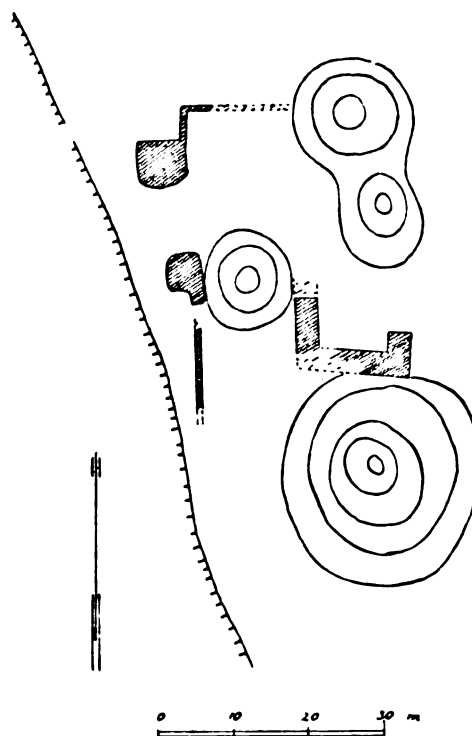


Fig. 80. Plan of the ruined stronghold 86, near the Ikhen-gol.
Concentric lines = tamarisk cones,
escarpment line = dry river-bed.

15. Small rectangular wooden piece, somewhat table-shaped and resembling the shape of the common wooden seal-cases. The cavity is here a concave depression on one side. $4.4 \times 2.1 \times 1.3$ cm
16. Small wooden prism with a narrow hole at one end. Handle of awl (?). The hole is rectangular (1.5×1 mm) and at least 6 mm deep, and has possibly caused a split in this end of the hard wooden piece. $2.3 \times 1 \times 0.8$ cm
17. Frs. of a small thin-walled wooden bowl with traces of black lacquer on the outside, red lacquer on the inside. The bowl seems to have been nearly round, and not of the ordinary oval outline
18. One of the two wooden points that are bound fast to the base of an arrow to keep the string in place. The small nearly triangular piece of hard, granulated brown wood is extraordinarily well worked with sharp edges and polished surfaces. The actual tip is black-lacquered on both sides, although traces indicate that at least the whole of the vaulted side has been covered by the lacquer; this has been coated thickly on a layer of light grey, porous substance on the vaulted side, but only as a thin slip without underlying layer on the back. Unique. 3×0.9 cm. Pl. 9:9
19. Fragm. of seal-impression in clay with a string remaining. Parts of two characters in high relief are visible
20. Small piece of bronze plate with verdigris. Fragm. of lamina from coat of armour ? Th. 0.5 mm
21. Sample of white plaster from a wall decorated with red and black stripes
22. Fragm. of a rain-cloak made of grass strings (and clusters) of the same kind as A 10:1; 97. This one has no overlapping segments formed by the split-up ends of the strings. The distance between the horizontal joints is 9—10 cm

Watch-tower 85. This mound of a tower is situated about 1250 m SW of Tower A 14, which in its turn lies at a distance of 1200 m SW of the North Ulan-durbeljin fortress. This second tower is of exactly the same shape as A 14. It was left untouched.

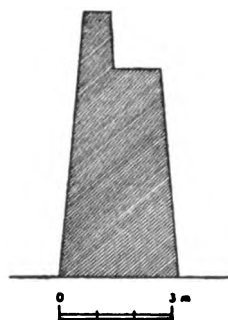


Fig. 81. Section of the brick wall of the fort in the ruined site 86.

Walled Enclosure and Fort 86

On the northern bank of a small rivulet that joins the Edsengol and the dried-up Etsina River there stands a small ruined fort within an enclosure among high tamarisk cones and *burukh*. The appearance of this ruin is quite picturesque as many of the walls have fallen down and large parts are covered by the tamarisk mounds. The ground-plan is therefore very incomplete (see Fig. 80). The actual stronghold is built of brick walls at somewhat oblique angles to each other; the walls are quite 3 m thick at the base and are crowned by a narrow parapet, 1.5 m high. The total height including the parapet is 7 m (Fig. 81). The bricks are of the same clumsy shape as those of the two ruins K 797 (Mamin-tsaghane-baishing) where the rivulet joins the Etsina River. Here there is, however, a layer of tamarisk boughs between every third course of bricks. An outer wall, less solid and lower, has enclosed the actual fort; only a part of its W face and the NW corner are still preserved. Its gate faces the dry rivulet and is strengthened by a small tower-like bastion on each side. The size of this outer enclosure may be estimated at about 40×50 m, assuming that the actual fort is placed near the centre.

No objects were found in the vicinity, but the construction shows some affinities with ruins from the time of Khara-khoto, i.e. the periods of T'ang, Sung and Yüan.

House 87. Between the fort ruin just described and Mamin-tsaghane-baishing there is a single house partly covered by *burukh*. It consists of a rectangle built of large bricks, the walls being rather solid. It is divided into one large and one small room. The size of the house is 14×13.5 m. See ground-plan, Fig. 82

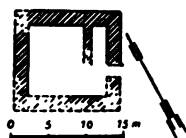


Fig. 82. Ruined house 87.

House Enclosure K 797

At the southern end of the same gravel surface as the fort Northern Ulan-durbeljin and in sight of it lie the ruins called Mamin-tsaghane-baishing. The larger ruin is a square enclosure measuring 38×33 m. Only the S and N walls are standing, and reach a height of 2.8 m. The walls are built of large, poorly shaped bricks of which the following sizes were noted: $37 \times 30 \times 19$, $33 \times 23 \times 17$,

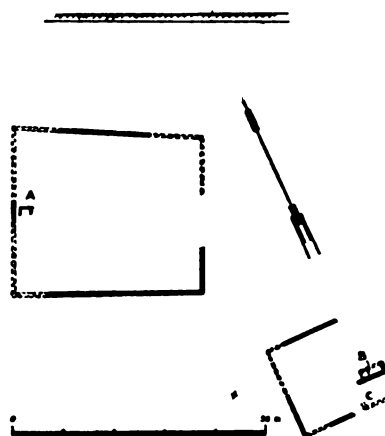


Fig. 83. Plan of the site K 797 (Mamin-tsanghane-baishing).
At A, B, and C paper scraps were found,
at the cross an arrow-head.

35 × — × 16, 34 × — × 18, 33 × — × 19, 33 × — × 18, and 33 × — × 16 cm. The thickness of the walls is only about 50 cm, as they are constructed with only a single row of stretchers and headers. According to Bergman, the fact that such thin walls are so well preserved may indicate a rather late date of construction. This large enclosure may have served as stables, corral or the like.

Near its SE corner there is a smaller enclosure built of the same kind of bricks, one side being 19 m in length. It contained remains of small rooms and showed traces of a fireplace in its NE corner.

North of the larger enclosure, and parallel to its side, runs a very low mound-shaped wall, the remains of an outer fence. The plan is shown in Fig. 83.

A couple of torn papers with large Chinese characters were found in the rooms of the smaller building (at "B" and "C" in Fig. 83), and a few paper scraps were also collected from the large enclosure (at "A"). The following objects were found on the ground between the two buildings.

K. 13797:

- | | |
|---|---|
| 1. Iron arrow-head with broad, flat blade which widens towards its obtuse-angled point. Part of the tang missing. L. (9.3), W. 3 cm | 4. Piece of light blue stoneware bowl, Kün ware, buff body |
| 2-3. Two pieces of porcelain cup. Pale green, nearly white Ying-ts'ing ware. No. 3 has a pattern of incised lines on the inside | 5-6. Two pieces of stoneware vessels with blackish brown and brown glazes on both sides. Yellow and yellowish grey body |

Watch-tower 88 is situated on the north bank of the Etsina River, only some hundred metres E of Mamin-tsaghane-baishing. Its base measures about 3 × 3 m, and it rises to a height of 2 m. It may have some relation to the following *tati*.

House 88 a is situated about 2.5 km SW of Mamin-tsaghane-baishing (K 797), on the west bank of the dried-up Etsina River. It is badly decayed, although it is built of so-called block bricks; only one corner is preserved, rising to a height of about 2 m.

Tati K 798 is situated 100 m S of the preceding tower, on black gravel close to the river-bed. The find of the Han coin may indicate that at this place a tower preceded the tower still standing to the north.

K. 13798:

1. Copper coin, *Huo-ts'üan* (14—40 A.D.).
Diam. 23 mm
2. Triangular bronze arrow-head, of the common Han type, with broken-off point, a triangular depression on one side, and straight corners directed upwards. Traces of bronze tang or tang-socket at the base end. L. 29, W. of sides 10 mm
3. Cylindrical bead of white stone.
L. 17, Diam. 6 mm

Watch-tower 89. On a nearly man-high platform of clay (?), the sides of which are strengthened by thin brick or stone walls, stands a tower built of "block" bricks. Its base measures 5 × 5 m, and its height is about 3 m. It is situated just halfway between Khara-khoto and Mamin-tsaghane-baishing, at the base of a terrace on which stands the following Han tower.

Watch-tower A 15 is rather decayed and built of bricks of large (Han ?) size. The finds were picked up from the ground.

A 15:

1. Triangular bronze arrow-head, of the common Han type, the edges of which seem to have been ground after use, traces of bronze tang. The corners are rounded. Brown "desert" patina.
L. 28, W. of sides 9 mm. Pl. 4: 4
2. Ditto with bronze tang or tang-socket preserved to a length of 6 mm (which seems to be near its original length). L. 28, W. of sides 9 mm. Pl. 4: 3
3. Fragm. of iron plate, irregularly broken off.
Th. 3—4 mm
4. Fragm. of socketed iron hoe-blade (?), consisting of one slightly curved corner.
Th. of material 2.5 mm
5. Fragm. of earthenware vessel, cord-marked. Light grey, homogeneous paste with brownish "sand patina"
6. Ditto, cord-marked. A-paste
7. Fragm. of unglazed stoneware vessel, cord-marked. Grey, homogeneous paste, slightly sand-tempered; hardness Mohs 5.5
8. Ditto, the cord-impressions partly effaced by plain, annular borders. Grey, homogeneous paste with partly blackish surfaces; hardness Mohs 5.0
9. Fragm. of earthenware vessel, cord-marked. Inside shows very fine lines from the potter's wheel. A-paste with brownish, rather glossy surface
10. Fragm. of earthenware vessel, cord-marked. Paste grey except at inner side where the slip has formed a 0.5 mm thick brown layer.
Th. of wall 8.5—10 mm
11. Fragm. of earthenware vessel, cord-marked. Light yellowish, well levigated, homogeneous paste
12. Fragm. of earthenware vessel, cord-marked. Grey paste with thick "sand patina" on the outside (slip ?)
13. Fragm. of earthenware vessel, the outer surface having alternating plain and cord-marked annular borders. Yellowish grey, homogeneous, well levigated paste

Locality 90 is situated some 2 km E of the preceding tower at the base of a terrace. It consists of a small mound of stones and contained a few potsherds (not described). Remains of a watch-tower, or simply an *obo*?

Locality 91 is a small mound of burnt bricks at the end of a long, narrow terrace overlooking the main road between Khara-khoto and Tsonbol.

INDEX OF PLATES 1-40

Plate	Inv. No.	Scale	Plate	Inv. No.	Scale	Plate	Inv. No.	Scale
1: 1	A. 22: II; 12	$\frac{1}{6}$	3	A. 15: 2	$\frac{2}{3}$	7	A. 8: I; 43	$\frac{1}{3}$
2	A. 35: 5; 31	$\frac{1}{4}$	4	A. 15: 1	$\frac{2}{3}$	8	A. 8: II S; 60	$\frac{1}{3}$
3	A. 1: II; 3	$\frac{1}{3}$	5	A. 33: 13; 56	$\frac{2}{3}$	9	A. 32: D; 43	$\frac{1}{3}$
4	A. 1: II; 1	$\frac{1}{3}$	6	A. 5: 1	$\frac{1}{1}$	10	A. 19: 2	$\frac{1}{3}$
5	A. 1: II; 2	$\frac{1}{3}$	7	A. 8: I; 461	$\frac{1}{1}$	11	A. 21: II; 40	$\frac{1}{3}$
6	A. 32: A; 60	$\frac{1}{3}$	8	A. 8: I; 462	$\frac{1}{1}$	12	A. 27: B; 8	$\frac{1}{3}$
7	A. 27: B; 32	$\frac{1}{3}$	9	A. 10: 18	$\frac{1}{1}$	13	A. 21: II; 21	$\frac{1}{3}$
8	A. 33: 3; 16	$\frac{1}{2}$	10	A. 10: I; 78	$\frac{1}{1}$	14	A. 10: II; 4	$\frac{1}{3}$
9	A. 35: 14	$\frac{1}{3}$	11	A. 8: II; 215	$\frac{1}{1}$	15	A. 8: II C; 1	$\frac{1}{3}$
10	A. 35: 16	$\frac{1}{2}$	12	A. 4: 1	$\frac{2}{3}$	16	A. 10: I; 23	$\frac{1}{3}$
11	A. 27: B; 30	$\frac{1}{6}$	13	A. 21: I; 40	$\frac{2}{3}$	17	A. 33: 5; 20	$\frac{1}{3}$
			14	A. 8: I; 455	$\frac{2}{3}$	18	A. 8: I; 416	$\frac{1}{3}$
2: 1	A. 32: E; 117	$\frac{1}{3}$	15	A. 32: A; 1	$\frac{1}{1}$			
2	A. 33: 5; 38	$\frac{1}{3}$	16	A. 32: 1	$\frac{2}{3}$	7: 1	A. 8: I; 28	$\frac{1}{3}$
3	A. 33: 5; 34	$\frac{1}{3}$	17	A. 33: 12; 8	$\frac{1}{1}$	2	A. 8: I; 123	$\frac{1}{3}$
4	A. 33: 5; 32	$\frac{1}{3}$	18	A. 35: 14; 1	$\frac{1}{1}$	3	A. 16: 2	$\frac{1}{3}$
5	A. 32: E; 120	$\frac{1}{3}$	19	A. 38: 1	$\frac{1}{1}$	4	A. 35: 4; 3	$\frac{1}{3}$
6	A. 32: E; 119	$\frac{1}{3}$				5	A. 8: I; 26	$\frac{1}{3}$
7	A. 32: E; 124	$\frac{1}{3}$	5: 1	A. 10: II; 28	$\frac{2}{3}$	6	A. 8: I; 30	$\frac{1}{3}$
8	A. 22: I; 75	$\frac{1}{3}$	2	A. 10: I; 81	$\frac{2}{3}$	7	A. 8: I; 33	$\frac{1}{3}$
9	A. 33: 5; 37	$\frac{1}{3}$	3	A. 10: I; 86	$\frac{2}{3}$	8	A. 8: I; 122	$\frac{1}{3}$
10	A. 35: 25	$\frac{1}{3}$	4	A. 8: II S; 54	$\frac{1}{2}$	9	A. 8: I; 124	$\frac{1}{3}$
11	A. 35: 23	$\frac{1}{3}$	5	A. 35: 15; 11	$\frac{2}{3}$	10	A. 8: I; 27	$\frac{1}{3}$
			6	A. 32 E; 113	$\frac{3}{4}$	11	A. 8: I; 126	$\frac{1}{3}$
3: 1	A. 27: B; 22	$\frac{1}{3}$	7	A. 33: 4; 148	$\frac{3}{4}$	12	A. 8: II; 57	$\frac{1}{3}$
2	A. 27: A; 2	$\frac{1}{3}$	8	A. 22: I; 76	$\frac{1}{2}$	13	A. 8: I; 127	$\frac{1}{3}$
3	A. 27: A; 6	$\frac{1}{3}$	9	A. 1: III; 2	$\frac{1}{2}$	14	A. 8: II; 58	$\frac{1}{3}$
4	A. 10: 10	$\frac{1}{3}$	10	A. 33: 4; 147	$\frac{5}{9}$			
5	A. 27: A; 3	$\frac{1}{3}$	11	A. 8: I; 449	$\frac{2}{3}$	8: 1	A. 8: II; 124	$\frac{1}{3}$
6	A. 27: B; 23	$\frac{1}{3}$	12	A. 33: 12; 13	$\frac{1}{2}$	2	A. 8: II; 125	$\frac{1}{3}$
7	A. 8: 7	$\frac{1}{3}$	13	A. 8: II; 219	$\frac{1}{3}$	3	A. 21: II; 17	$\frac{1}{3}$
8	A. 10: 9	$\frac{1}{3}$	14	A. 10: 7	$\frac{1}{3}$	4	A. 16: 3	$\frac{1}{3}$
9	A. 8: 1	$\frac{1}{3}$	15	A. 35: 15; 10	$\frac{1}{4}$	5	A. 8: II A; 44	$\frac{3}{5}$
10	A. 8: 6	$\frac{1}{3}$	16	A. 8: I; 450	$\frac{1}{2}$	6	A. 8: I; 321	$\frac{1}{3}$
11	A. 8: II S; 82	$\frac{1}{3}$				7	A. 8: I; 281	$\frac{1}{3}$
12	A. 8: 9	$\frac{1}{3}$	6: 1	A. 10: II; 27	$\frac{1}{3}$	8	A. 21: II; 15	$\frac{1}{3}$
13	A. 1: I; 4	$\frac{1}{3}$	2	A. 10: I; 80	$\frac{1}{3}$	9	A. 8: I; 269	$\frac{1}{3}$
14	A. 1: I; 1	$\frac{1}{3}$	3	A. 10: I; 79	$\frac{1}{3}$	10	A. 8: I; 400	$\frac{1}{3}$
			4	A. 33: 4; 90	$\frac{1}{3}$	11	A. 10: I; 33	$\frac{1}{3}$
4: 1	A. 35: 4	$\frac{2}{3}$	5	A. 8: II A; 56	$\frac{1}{3}$	12	A. 8: I; 212	$\frac{1}{3}$
2	A. 35: 5	$\frac{2}{3}$	6	A. 8: I; 23	$\frac{1}{3}$	13	A. 8: II D; 11	$\frac{1}{3}$

Plate	Inv. No.	Scale	Plate	Inv. No.	Scale	Plate	Inv. No.	Scale
14	A. 8: I; 211	$\frac{1}{3}$	4	A. 8: II D; 1	$\frac{2}{3}$	19	A. 33: 4; 92	$\frac{1}{3}$
15	A. 8: II; 113	$\frac{1}{3}$	5	A. 35: 13; 45	$\frac{1}{6}$	20	A. 33: 13; 11	$\frac{1}{3}$
16	A. 8: II; 122	$\frac{1}{3}$	6	A. 32: E; 17	$\frac{1}{3}$	21	A. 10: II; 1	$\frac{1}{3}$
17	A. 8: I; 221	$\frac{1}{3}$	7	A. 8: II S; 1	$\frac{2}{3}$	22	A. 8: I; 201	$\frac{1}{3}$
18	A. 8: II; 171	$\frac{1}{3}$	8	A. 8: I; 20	$\frac{1}{3}$	23	A. 8: II A; 37	$\frac{1}{3}$
19	A. 8: II; 118	$\frac{1}{3}$	9	A. 35: 4; 1	$\frac{2}{3}$	24	A. 8: I; 209	$\frac{1}{3}$
20	A. 8: II S; 44	$\frac{1}{3}$	10	A. 35: 3; 4	$\frac{1}{3}$			
21	A. 8: II S; 45	$\frac{1}{3}$	11	A. 8: I; 315	$\frac{1}{3}$	15: 1	A. 8: I; 118	$\frac{1}{3}$
9: 1	(P 9) P. 359: 1	$\frac{1}{4}$	12	A. 33: 4; 114-116	$\frac{1}{6}$	2	A. 8: I; 119	$\frac{1}{3}$
2	(A 10) P. 281: 1, 2	$\frac{2}{7}$	13	A. 8: II; 130	$\frac{1}{3}$	3	A. 8: III; 69	$\frac{1}{3}$
3	A. 32: A; 52	$\frac{1}{4}$	14	A. 8: II; 129	$\frac{1}{3}$	4	A. 8: II E; 29	$\frac{1}{3}$
4	A. 21: II; 41	$\frac{1}{3}$	15	A. 8: I; 111	$\frac{1}{4}$	5	A. 8: I; 120	$\frac{1}{3}$
5	A. 33: 13; 14	$\frac{1}{3}$	16	A. 8: I; 104	$\frac{1}{4}$	6	A. 8: II A; 73	$\frac{1}{3}$
6	A. 35: 13; 100	$\frac{1}{4}$	17	A. 8: I; 285	$\frac{1}{3}$	7	A. 35: 3; 1	$\frac{1}{3}$
7	A. 21: II; 18	$\frac{1}{4}$	18	A. 27: B; 6	$\frac{2}{3}$	8	A. 29: 1	$\frac{1}{3}$
8	(A 1) P. 418: 3	$\frac{1}{3}$	19	A. 24: 9	$\frac{1}{6}$	9	A. 35: 2; 24	$\frac{1}{3}$
9	A. 14: 18	$\frac{1}{2}$	13: 1	A. 22: II; 2	$\frac{1}{3}$	16: 1	A. 33: 10; 22	$\frac{1}{3}$
10	A. 10: I; 77	$\frac{1}{7}$	2	A. 10: I; 24	$\frac{1}{3}$	2	A. 22: I; 81	$\frac{1}{3}$
11	A. 35: 15; 8	$\frac{1}{8}$	3	A. 35: 4; 2	$\frac{1}{3}$	3	A. 22: I; 80	$\frac{1}{3}$
12	A. 7: 1	$\frac{1}{6}$	4	A. 8: II A; 43	$\frac{1}{3}$	4	A. 10: 14	$\frac{1}{3}$
13	A. 32: A; 46	$\frac{1}{5}$	5	A. 21: I; 5	$\frac{1}{3}$	5	A. 18: 8	$\frac{1}{2}$
14	A. 29: 2	$\frac{1}{4}$	6	A. 10: 17	$\frac{1}{3}$	6	A. 22: I; 79	$\frac{1}{3}$
10: 1	A. 8: II S; 35	$\frac{1}{3}$	7	A. 8: II N; 17	$\frac{1}{3}$	7	A. 8: II; 232	$\frac{1}{3}$
2	A. 33: 2; 1	$\frac{1}{3}$	8	A. 8: II N; 18	$\frac{1}{3}$	8	A. 22: I; 83	$\frac{1}{3}$
3	A. 8: II; 170	$\frac{1}{3}$	9	A. 8: I; 312	$\frac{1}{3}$			
4	A. 8: II; 180	$\frac{1}{3}$	10	A. 8: I; 387	$\frac{1}{4}$	17: 1	A. 18: 1	$\frac{1}{4}$
5	A. 22: I; 63	$\frac{1}{3}$	11	A. 8: II; 190	$\frac{1}{3}$	2 a, b	A. 8: I; 437	$\frac{2}{3}$
6	A. 33: 13; 17	$\frac{1}{3}$	12	A. 8: I; 232	$\frac{1}{3}$	3	A. 8: II S; 83	$\frac{1}{4}$
7	A. 8: II; 187	$\frac{1}{3}$	13	A. 8: I; 240	$\frac{1}{3}$	4	A. 10: I; 97	$\frac{1}{10}$
8	A. 8: II; 131	$\frac{1}{3}$	14	A. 8: I; 229	$\frac{1}{3}$	5	A. 33: 6; 70.20	$\frac{2}{5}$
9	A. 21: I; 4	$\frac{1}{3}$	15	A. 8: I; 21	$\frac{1}{3}$	6	A. 10: II; 31	$\frac{3}{7}$
10	A. 10: 1	$\frac{1}{3}$	16	A. 8: I; 318	$\frac{1}{3}$	7	A. 6: 1	$\frac{2}{3}$
11	A. 10: I; 38	$\frac{1}{3}$	17	A. 8: II D; 4	$\frac{1}{3}$	8	A. 33: 6; 70.21	$\frac{2}{5}$
12	A. 8: II; 179	$\frac{1}{3}$	18	A. 8: II S; 67	$\frac{1}{3}$	9	A. 26: 2	$\frac{2}{5}$
13	A. 8: II N; 13	$\frac{1}{3}$	19	A. 8: II N; 20	$\frac{1}{3}$	10	(Unused number)	
14	A. 10: I; 37	$\frac{1}{3}$	20	A. 8: I; 25	$\frac{1}{3}$	11	A. 35: 12	$\frac{1}{2}$
15	A. 33: 5; 53	$\frac{1}{3}$	21	A. 8: I; 368	$\frac{1}{3}$	12	A. 42: 1	$\frac{1}{6}$
						13	A. 35: 9	$\frac{2}{5}$
11: 1	A. 33: 4; 111	$\frac{1}{3}$	14: 1	A. 32: A; 6	$\frac{1}{3}$	14	A. 8: II; 225	$\frac{1}{5}$
2	A. 8: II S; 33	$\frac{1}{3}$	2	A. 8: I; 88	$\frac{1}{3}$			
3	A. 8: I; 34	$\frac{1}{3}$	3	A. 8: I; 50	$\frac{1}{3}$	18: 1	A. 10: II; 35	$\frac{1}{3}$
4	A. 35: 2; 13	$\frac{1}{3}$	4	A. 7: 4	$\frac{1}{3}$	2	A. 27: A; 9	$\frac{1}{3}$
5	A. 8: I; 17	$\frac{1}{3}$	5	A. 8: I; 170	$\frac{1}{3}$	3	A. 27: B; 10	$\frac{1}{3}$
6	A. 8: I; 18	$\frac{1}{3}$	6	A. 8: I; 150	$\frac{1}{3}$	4	A. 10: II; 36	$\frac{1}{3}$
7	A. 14: 1	$\frac{1}{3}$	7	A. 8: I; 87	$\frac{1}{3}$	5	A. 33: 13; 68	$\frac{1}{2}$
8	A. 8: II A; 74	$\frac{1}{3}$	8	A. 35: 3; 2	$\frac{1}{3}$	6	A. 33: 13; 66	$\frac{1}{3}$
9	A. 8: II A; 20	$\frac{1}{3}$	9	A. 8: I; 86	$\frac{1}{3}$			
10	A. 8: II A; 55	$\frac{1}{3}$	10	A. 8: I; 199	$\frac{1}{3}$	19: 1	K. 13710: 90	$\frac{1}{3}$
11	A. 8: I; 313	$\frac{1}{3}$	11	A. 8: II A; 28	$\frac{1}{3}$	2	K. 13775	$\frac{1}{3}$
12	A. 8: I; 314	$\frac{1}{3}$	12	A. 8: I; 57	$\frac{1}{3}$	3	K. 13710: 91	$\frac{1}{3}$
13	A. 10: II; 21	$\frac{1}{3}$	13	A. 8: I; 205	$\frac{1}{3}$	4	K. 13710: 166	$\frac{1}{2}$
12: 1	A. 8: I; 39	$\frac{1}{3}$	14	A. 8: II; 50	$\frac{1}{3}$	5	K. 13789: 47	$\frac{1}{2}$
2	A. 8: II; 147	$\frac{1}{3}$	15	A. 8: I; 206	$\frac{1}{3}$	6	K. 13710: 155	$\frac{1}{2}$
3	A. 8: I; 19	$\frac{1}{3}$	16	A. 8: II; 51	$\frac{1}{3}$	7	K. 13710: 164	$\frac{1}{2}$
			17	A. 8: II A; 10	$\frac{1}{3}$	8	K. 13799: 233	$\frac{1}{2}$
			18	A. 8: II; 52	$\frac{1}{3}$	9	K. 13718: 69	$\frac{1}{2}$

Plate	Inv. No.	Scale	Plate	Inv. No.	Scale	Plate	Inv. No.	Scale
10	K. 13710: 150	$\frac{1}{4}$	23: 1	K. 13802: 32	$\frac{1}{2}$	8	K. 13769: 23	$\frac{1}{3}$
11	K. 13698: 20	$\frac{1}{2}$	2	K. 13760: 7	$\frac{2}{3}$	9 a,b	K. 13805: 22	$\frac{3}{7}$
12	K. 13749: 5	$\frac{1}{2}$	3	K. 13723: 15	$\frac{2}{3}$	10	K. 13799: 34	$\frac{1}{3}$
13	K. 13710: 171	$\frac{1}{2}$	4	K. 13729: 9	$\frac{2}{3}$	27: 1	K. 13717: 7	$\frac{4}{9}$
14	K. 13750: 3	$\frac{1}{2}$	5	K. 13799: 177	$\frac{2}{3}$	2	K. 13717: 9	$\frac{4}{9}$
20: 1	K. 13766: 8	$\frac{1}{2}$	6	K. 13799: 132	$\frac{2}{3}$	3	K. 13801: 15	$\frac{3}{7}$
2	K. 13759: 22	$\frac{1}{3}$	7	K. 13703: 28	$\frac{2}{3}$	4	K. 13801: 14	$\frac{3}{7}$
3	K. 13736: 20	$\frac{1}{2}$	8	K. 13718: 78	$\frac{2}{3}$	5	K. 13812: 1	$\frac{1}{2}$
4	K. 13799: 302	$\frac{1}{2}$	9	K. 13738: 7	$\frac{2}{3}$	6	K. 13784: 7	$\frac{3}{7}$
5	K. 13698: 21	$\frac{1}{3}$	10	K. 13754: 3	$\frac{1}{1}$	7	K. 13802: 25	$\frac{1}{2}$
6	K. 13769: 35	$\frac{2}{3}$	11	K. 13724: 28	$\frac{2}{3}$	8 a,b	K. 13811: 2	$\frac{1}{2}$
7	K. 13710: 174	$\frac{1}{2}$	12	K. 13802: 31	$\frac{2}{3}$	9	K. 13812: 1	$\frac{1}{2}$
8	K. 13710: 100	$\frac{2}{3}$	13	K. 13692: 1	$\frac{1}{1}$	10	K. 13801: 26	$\frac{1}{2}$
9	K. 13710: 93	$\frac{2}{3}$	14	K. 13782: 13	$\frac{1}{1}$	11	K. 13812: 4	$\frac{1}{2}$
10	K. 13710: 113	$\frac{1}{2}$	15	K. 13734: 6	$\frac{1}{2}$	12	K. 13801: 27	$\frac{1}{2}$
11	K. 13710: 175	$\frac{1}{2}$	16	K. 13700: 6	$\frac{1}{2}$	28: 1	K. 13801: 28	$\frac{2}{3}$
12	K. 13710: 173	$\frac{1}{2}$	24: 1	K. 13724: 21	$\frac{1}{3}$	2	K. 13812: 2	$\frac{2}{3}$
13	K. 13756: 28	$\frac{1}{2}$	2	K. 13814: 2	$\frac{1}{3}$	3	K. 13802: 10	$\frac{2}{3}$
14	K. 13786: 4	$\frac{2}{3}$	3	K. 13777: 2	$\frac{1}{3}$	4	K. 13802: 14	$\frac{2}{3}$
15	K. 13713: 1	$\frac{1}{2}$	4	K. 13769: 22	$\frac{3}{7}$	5	K. 13715: 15	$\frac{2}{3}$
16	K. 13789: 49	$\frac{1}{2}$	5	K. 13769: 20	$\frac{2}{9}$	6	K. 13799: 32	$\frac{2}{3}$
17	K. 13794: 27	$\frac{2}{3}$	6	K. 13703: 25	$\frac{2}{9}$	7	K. 13799: 4	$\frac{2}{3}$
18	K. 13802: 33	$\frac{1}{2}$	7	K. 13799: 200	$\frac{2}{5}$	8	K. 13779: 15	$\frac{2}{3}$
19	K. 13710: 176	$\frac{1}{2}$	8	K. 13759: 25	$\frac{2}{9}$	9	K. 13799: 13	$\frac{2}{3}$
20	K. 13743: 46	$\frac{1}{2}$	9	K. 13811: 13	$\frac{1}{3}$	10	K. 13802: 15	$\frac{2}{3}$
21	K. 13762: 19	$\frac{1}{2}$	10	K. 13769: 21	$\frac{3}{7}$	11	K. 13715: 15	$\frac{2}{3}$
21: 1	K. 13799: 157	$\frac{2}{3}$	11	K. 13765: 24	$\frac{1}{4}$	12	K. 13802: 27	$\frac{2}{3}$
2	K. 13764: 7	$\frac{2}{3}$	12	K. 13800: 21	$\frac{2}{5}$	13	K. 13812: 2	$\frac{2}{3}$
3	K. 13799: 430	$\frac{1}{2}$	25: 1	K. 13811: 11	$\frac{2}{3}$	14	K. 13773: 13	$\frac{2}{3}$
4	K. 13779: 95	$\frac{2}{5}$	2	K. 13801: 31	$\frac{2}{3}$	15	K. 13773: 15	$\frac{2}{3}$
5	K. 13786: 7	$\frac{2}{3}$	3	K. 13740: 12	$\frac{2}{3}$	16	K. 13801: 13	$\frac{2}{3}$
6	K. 13764: 2	$\frac{1}{3}$	4	K. 13799: 145	$\frac{2}{3}$	17 a,b	K. 13799: 16	$\frac{2}{3}$
7	K. 13799: 312	$\frac{4}{9}$	5	K. 13789: 66	$\frac{2}{3}$	18	K. 13807: 8	$\frac{2}{3}$
8	K. 13786: 5	$\frac{2}{3}$	6	K. 13724: 30	$\frac{1}{1}$	29: 1	K. 13811: 6	$\frac{2}{3}$
9	K. 13718: 65	$\frac{2}{3}$	7	K. 13741: 4	$\frac{2}{3}$	2	K. 13799: 148	$\frac{2}{3}$
10	K. 13786: 9	$\frac{2}{3}$	8	K. 13799: 125	$\frac{2}{3}$	3	K. 13807: 7	$\frac{2}{3}$
11	K. 13760: 11	$\frac{1}{2}$	9	K. 13744: 2	$\frac{2}{3}$	4	K. 13799: 330	$\frac{2}{3}$
12	K. 13786: 6	$\frac{3}{7}$	10	K. 13789: 56	$\frac{2}{3}$	5	K. 13794: 19	$\frac{2}{3}$
13	K. 13779: 117	$\frac{2}{5}$	11	K. 13799: 128	$\frac{2}{3}$	6	K. 13799: 11	$\frac{2}{3}$
22: 1	K. 13761: 18	$\frac{3}{7}$	12	K. 13779: 51	$\frac{2}{3}$	7	K. 13806: 12	$\frac{2}{3}$
2	K. 13771: 23	$\frac{1}{3}$	13	K. 13783: 13	$\frac{1}{3}$	8	K. 13802: 7	$\frac{2}{3}$
3	K. 13761: 19	$\frac{2}{9}$	14	K. 13802: 9	$\frac{2}{3}$	9	K. 13779: 27	$\frac{2}{3}$
4	K. 13761: 13	$\frac{2}{3}$	15	K. 13744: 5	$\frac{2}{3}$	10	K. 13799: 3	$\frac{2}{3}$
5	K. 13746: 1	$\frac{2}{3}$	16	K. 13760: 1	$\frac{2}{3}$	11	K. 13799: 1	$\frac{2}{3}$
6	K. 13715: 18	$\frac{2}{5}$	17	K. 13728: 8	$\frac{1}{1}$	12	K. 13779: 29	$\frac{2}{3}$
7	K. 13789: 41	$\frac{3}{5}$	18	K. 13788: 4	$\frac{2}{3}$	13	K. 13802: 20	$\frac{2}{3}$
8	K. 13761: 16	$\frac{1}{3}$	19	K. 13785: 33	$\frac{2}{3}$	14	K. 13779: 26	$\frac{2}{3}$
9	K. 13769: 29	$\frac{1}{2}$	26: 1	K. 13766: 12	$\frac{1}{3}$	15	K. 13799: 201	$\frac{2}{3}$
10	K. 13726: 11	$\frac{1}{2}$	2	K. 13800: 24	$\frac{1}{3}$	16	K. 13779: 22	$\frac{2}{3}$
11	K. 13760: 6	$\frac{2}{3}$	3	K. 13743: 45	$\frac{1}{3}$	17	K. 13802: 15	$\frac{2}{3}$
12	K. 13731: 8	$\frac{2}{5}$	4	K. 13779: 43	$\frac{1}{2}$	18	K. 13802: 18	$\frac{2}{3}$
13	K. 13709: 12	$\frac{1}{3}$	5	K. 13697: 11	$\frac{1}{2}$	19	K. 13799: 14	$\frac{2}{3}$
14	K. 13729: 8 a	$\frac{1}{2}$	6	K. 13799: 199	$\frac{1}{4}$	20	K. 13779: 15	$\frac{2}{3}$
15	K. 13779: 76	$\frac{1}{4}$	7	K. 13807: 10	$\frac{1}{4}$	21	K. 13779: 32	$\frac{2}{3}$

Plate	Inv. No.	Scale	Plate	Inv. No.	Scale	Plate	Inv. No.	Scale
22	K. 13802: 16	$\frac{2}{3}$	31: 1	K. 13722: 6	$\frac{2}{3}$	18	K. 13719: 12	$\frac{1}{1}$
23	K. 13779: 24	$\frac{2}{3}$	2	K. 13814: 1	$\frac{1}{4}$	19	K. 13788: 3	$\frac{1}{1}$
24	K. 13811: 3	$\frac{2}{3}$	3 a, b	K. 13779: 3	$\frac{2}{3}$	20	K. 13773: 7	$\frac{1}{1}$
30: 1	K. 13791: 24	$\frac{2}{3}$	4	K. 13757: 5	$\frac{3}{2}$	21	K. 13710: 27	$\frac{1}{1}$
2	K. 13778: 13	$\frac{2}{3}$	5	K. 13799: 212	$\frac{2}{3}$	22	K. 13717: 3	$\frac{1}{1}$
3	K. 13789: 27	$\frac{2}{3}$	6	K. 13813	$\frac{2}{3}$	23	K. 13799: 184	$\frac{2}{6}$
4	K. 13789: 28	$\frac{2}{3}$	7	K. 13759: 8	$\frac{5}{8}$	24	K. 13742: 14	$\frac{1}{3}$
5	K. 13710: 83	$\frac{2}{3}$	8	K. 13736: 10	$\frac{2}{3}$	25	K. 13710: 25	$\frac{1}{1}$
6	K. 13726: 2	$\frac{1}{1}$	9	K. 13799: 83	$\frac{2}{3}$	26	K. 13736: 3	$\frac{1}{1}$
7	K. 13768: 7	$\frac{1}{1}$	10	K. 13799: 434	$\frac{2}{3}$	27	K. 13789: 13	$\frac{1}{1}$
8	K. 13765: 13	$\frac{2}{3}$	11	K. 13804: 2	$\frac{2}{3}$			
9	K. 13731: 4	$\frac{1}{1}$	12	K. 13776: 1	$\frac{1}{3}$	34: 1	K. 13718: 31	$\frac{1}{1}$
10	K. 13758: 17	$\frac{2}{3}$	32: 1	K. 13687: 1	$\frac{1}{1}$	2	K. 13792: 2	$\frac{1}{1}$
11	K. 13742: 30	$\frac{2}{3}$	2	K. 13722: 5	$\frac{1}{1}$	3	K. 13771: 8	$\frac{1}{1}$
12	K. 13780: 4	$\frac{2}{3}$	3	K. 13782: 5	$\frac{1}{1}$	4	K. 13759: 6	$\frac{1}{1}$
13	K. 13801: 10	$\frac{1}{1}$	4	K. 13710: 35	$\frac{1}{1}$	5	K. 13748: 3	$\frac{1}{1}$
14	K. 13718: 48	$\frac{1}{1}$	5	K. 13815: 2	$\frac{1}{1}$	6	K. 13770: 3	$\frac{1}{1}$
15	K. 13695: 13	$\frac{1}{1}$	6	K. 13742: 18	$\frac{1}{1}$	7	K. 13790: 5	$\frac{1}{1}$
16	K. 13710: 62	$\frac{1}{1}$	7	K. 13808: 1	$\frac{1}{1}$	8	K. 13792: 3	$\frac{1}{1}$
17	K. 13710: 61	$\frac{1}{1}$	8	K. 13695: 3	$\frac{1}{1}$	9	K. 13757: 6	$\frac{1}{1}$
18	K. 13777: 17	$\frac{1}{1}$	9	K. 13794: 5	$\frac{1}{1}$	10	K. 13799: 190	$\frac{1}{1}$
19	K. 13782: 9	$\frac{1}{1}$	10	K. 13698: 9	$\frac{1}{1}$	11	K. 13737: 2	$\frac{1}{1}$
20	K. 13779: 9	$\frac{2}{3}$	11	K. 13780: 1	$\frac{1}{1}$	12	K. 13800: 3	$\frac{1}{1}$
21	K. 13772: 13	$\frac{1}{1}$	12	K. 13743: 15	$\frac{1}{1}$	13	K. 13718: 30	$\frac{1}{1}$
22	K. 13693: 13	$\frac{1}{1}$	13	K. 13785: 18	$\frac{1}{1}$	14	K. 13753: 2	$\frac{1}{1}$
23	K. 13768: 9	$\frac{1}{1}$	14	K. 13721: 19	$\frac{1}{1}$	15	K. 13783: 7	$\frac{1}{1}$
24	K. 13771: 15	$\frac{1}{1}$	15	K. 13743: 17	$\frac{1}{1}$	16	K. 13721: 13	$\frac{1}{1}$
25	K. 13769: 9	$\frac{1}{1}$	16	K. 13736: 8	$\frac{1}{1}$	17	K. 13703: 4	$\frac{1}{1}$
26	K. 13693: 12	$\frac{1}{1}$	17	K. 13736: 4	$\frac{1}{1}$	18	K. 13718: 29	$\frac{1}{1}$
27	K. 13711: 30	$\frac{1}{1}$	18	K. 13719: 13	$\frac{1}{1}$			
28	K. 13701: 13	$\frac{1}{1}$	19	K. 13745	$\frac{1}{1}$	35: 1	K. 13766: 3	$\frac{1}{1}$
29	K. 13799: 198	$\frac{1}{1}$	20	K. 13799: 94	$\frac{1}{1}$	2	K. 13770: 5	$\frac{1}{1}$
30	K. 13702: 20	$\frac{1}{1}$	21	K. 13772: 4	$\frac{1}{1}$	3	K. 13721: 14	$\frac{1}{1}$
31	K. 13721: 32	$\frac{1}{1}$	22	K. 13698: 8	$\frac{1}{1}$	4	K. 13712: 23	$\frac{1}{1}$
32	K. 13791: 25	$\frac{2}{3}$	23	K. 13721: 12	$\frac{1}{1}$	5	K. 13721: 15	$\frac{1}{1}$
33	K. 13753: 6	$\frac{1}{1}$	24	K. 13698: 10	$\frac{1}{1}$	6	K. 13702: 8	$\frac{1}{1}$
34	K. 13726: 5	$\frac{1}{1}$	25	K. 13799: 85	$\frac{1}{1}$	7	K. 13718: 34	$\frac{1}{1}$
35	K. 13723: 12	$\frac{1}{1}$	26	K. 13754: 1	$\frac{1}{1}$	8	K. 13718: 33	$\frac{1}{1}$
36	K. 13710: 45	$\frac{1}{1}$	33: 1	K. 13810: 2	$\frac{1}{1}$	9	K. 13710: 33	$\frac{1}{1}$
37	K. 13710: 48	$\frac{1}{1}$	2	K. 13752: 1	$\frac{1}{1}$	10	K. 13799: 163	$\frac{1}{1}$
38	K. 13816: 3	$\frac{1}{1}$	3	K. 13743: 14	$\frac{1}{1}$	11	K. 13805: 15	$\frac{1}{1}$
39	K. 13708: 9	$\frac{1}{1}$	4	K. 13710: 24	$\frac{1}{1}$	12	K. 13716: 6	$\frac{1}{1}$
40	K. 13702: 16	$\frac{1}{1}$	5	K. 13712: 14	$\frac{1}{1}$	13	K. 13799: 192	$\frac{1}{1}$
41	K. 13710: 80	$\frac{1}{1}$	6	K. 13793: 5	$\frac{1}{1}$	14	K. 13758: 10	$\frac{1}{1}$
42	K. 13799: 331	$\frac{1}{1}$	7	K. 13711: 1	$\frac{1}{1}$	15	K. 13721: 16	$\frac{1}{1}$
43	K. 13736: 14	$\frac{1}{1}$	8	K. 13718: 2	$\frac{1}{1}$	16	K. 13799: 69	$\frac{1}{1}$
44	K. 13701: 12	$\frac{1}{1}$	9	K. 13789: 3	$\frac{1}{1}$	17	K. 13715: 7	$\frac{1}{1}$
45	K. 13805: 18	$\frac{1}{1}$	10	K. 13693: 4	$\frac{1}{1}$	18	K. 13742: 15, 16	$\frac{1}{1}$
46	K. 13765: 18	$\frac{1}{1}$	11	K. 13759: 7	$\frac{1}{1}$	19	K. 13711: 21 a	$\frac{1}{3}$
47	K. 13757: 10	$\frac{1}{1}$	12	K. 13710: 28	$\frac{1}{1}$	20	K. 13803: 3	$\frac{1}{1}$
48	K. 13819	$\frac{1}{1}$	13	K. 13718: 1	$\frac{1}{1}$			
49	K. 13749: 16	$\frac{1}{1}$	14	K. 13771: 9	$\frac{1}{1}$	36: 1	K. 13759: 12	$\frac{2}{3}$
50	K. 13702: 23	$\frac{1}{1}$	15	K. 13799: 386	$\frac{1}{1}$	2	K. 13823: 1	$\frac{2}{3}$
51	K. 13702: 21	$\frac{1}{1}$	16	K. 13785: 19	$\frac{2}{5}$	3	K. 13779: 104	$\frac{3}{7}$
			17	K. 13808: 2	$\frac{1}{3}$	4	K. 13793: 6	$\frac{2}{3}$
						5	K. 13712: 15	$\frac{2}{3}$

Plate	Inv. No.	Scale	Plate	Inv. No.	Scale	Plate	Inv. No.	Scale
6	K. 13743: 37	$\frac{3}{4}$	11	K. 13700: 1	$\frac{1}{1}$	22	K. 13779: 105	$\frac{2}{3}$
7	K. 13743: 31	$\frac{2}{3}$	12	K. 13768: 1	$\frac{2}{3}$	23	K. 13721: 21	$\frac{2}{3}$
8	K. 13743: 22	$\frac{1}{2}$	13	K. 13799: 385	$\frac{1}{1}$			
9	K. 13783: 6	$\frac{2}{3}$	14	K. 13743: 41	$\frac{1}{3}$	39: 1	K. 13799: 288	$\frac{1}{3}$
10	K. 13710: 26	$\frac{2}{3}$	15	K. 13799: 140	$\frac{1}{2}$	2	K. 13799: 239	$\frac{1}{3}$
11	K. 13711: 26	$\frac{2}{3}$	16	K. 13759: 3	$\frac{1}{1}$	3	K. 13779: 110	$\frac{2}{3}$
12	K. 13743: 40	$\frac{1}{6}$	17	K. 13710: 88	$\frac{1}{3}$	4	K. 13799: 106	$\frac{1}{3}$
13	K. 13729: 3	$\frac{1}{2}$	18	K. 13799: 174	$\frac{2}{5}$	5	K. 13799: 227	$\frac{1}{3}$
14	K. 13800: 5	$\frac{1}{2}$	19	K. 13799: 371	$\frac{1}{1}$	6	K. 13698: 18	$\frac{1}{3}$
15	K. 13712: 17	$\frac{1}{2}$				7	K. 13799: 326	$\frac{2}{3}$
16	K. 13712: 18	$\frac{1}{2}$	38: 1	K. 13709: 6	$\frac{1}{1}$	8	K. 13799: 435	$\frac{1}{3}$
17	K. 13781: 1	$\frac{1}{3}$	2	K. 13799: 181	$\frac{1}{3}$	9	K. 13799: 112	$\frac{2}{3}$
18	K. 13765: 11	$\frac{1}{1}$	3	K. 13799: 86	$\frac{1}{1}$	10	K. 13799: 378	$\frac{1}{2}$
19	K. 13714: 1	$\frac{1}{4}$	4	K. 13799: 58	$\frac{2}{3}$	11	K. 13799: 347	$\frac{1}{3}$
20	K. 13799: 310	$\frac{1}{3}$	5	K. 13769: 14	$\frac{1}{3}$	12	K. 13799: 346	$\frac{1}{3}$
21	K. 13766: 1	$\frac{1}{3}$	6	K. 13799: 395	$\frac{1}{3}$	13	K. 13809: 5	$\frac{1}{3}$
22	K. 13810: 7	$\frac{1}{4}$	7	K. 13789: 55	$\frac{2}{3}$			
23	K. 13712: 27	$\frac{1}{2}$	8	K. 13799: 438	$\frac{2}{6}$	40: 1	K. 13799: 323	$\frac{2}{3}$
24	K. 13712: 26	$\frac{1}{2}$	9	K. 13799: 54	$\frac{2}{3}$	2	K. 13799: 207	$\frac{2}{3}$
25	K. 13796: 7	$\frac{1}{2}$	10	K. 13799: 394	$\frac{2}{3}$	3	K. 13779: 124	$\frac{2}{3}$
37: 1	K. 13721: 22	$\frac{2}{3}$	11	K. 13759: 14	$\frac{1}{1}$	4	K. 13799: 359	$\frac{1}{1}$
2	K. 13799: 196	$\frac{2}{3}$	12	K. 13718: 41	$\frac{1}{3}$	5	K. 13779: 116	$\frac{1}{3}$
3	K. 13799: 53	$\frac{2}{3}$	13	K. 13799: 238	$\frac{2}{3}$	6	K. 13799: 279	$\frac{2}{3}$
4	K. 13683	$\frac{1}{2}$	14	K. 13807: 4	$\frac{1}{3}$	7	K. 13799: 222	$\frac{2}{3}$
5	K. 13799: 57	$\frac{2}{3}$	15	K. 13743: 33	$\frac{1}{1}$	8	K. 13728: 2	$\frac{1}{6}$
6	K. 13701: 8	$\frac{1}{1}$	16	K. 13799: 283	$\frac{1}{3}$	9	K. 13799: 360	$\frac{2}{3}$
7	K. 13758: 12	$\frac{2}{3}$	17	K. 13799: 282	$\frac{1}{3}$	10	K. 13799: 224	$\frac{1}{3}$
8	K. 13769: 15	$\frac{2}{3}$	18	K. 13712: 21	$\frac{1}{1}$	11	K. 13776: 5	$\frac{1}{3}$
9	K. 13779: 107	$\frac{1}{3}$	19	K. 13739: 1	$\frac{1}{2}$	12	K. 13799: 407	$\frac{1}{3}$
10	K. 13718: 46	$\frac{2}{5}$	20	K. 13784: 2	$\frac{1}{1}$	13	K. 13799: 231	$\frac{1}{5}$
			21	K. 13805: 12	$\frac{1}{1}$	14	K. 13799: 405	$\frac{1}{3}$

PLATES

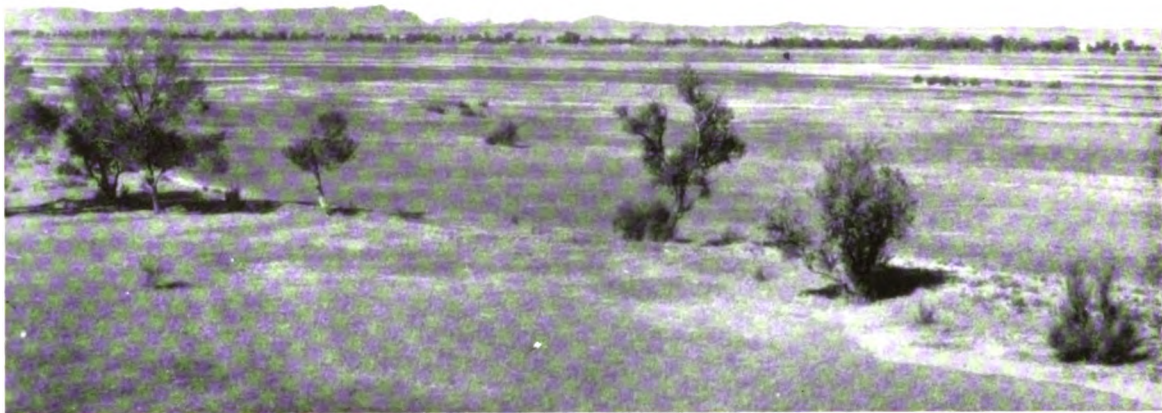


a. The Edsen-gol in October, seen from the crest of Ulan-durbeljin (A 33).



b. In March, the flood-water reaches the neighbourhood of Bayan-torei on the Ontsein-gol, the easternmost arm of the delta.

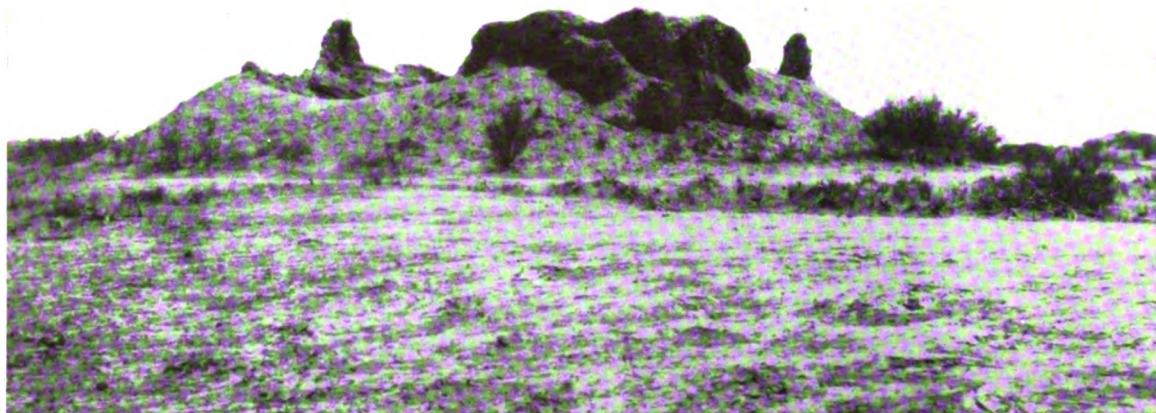
Pl. II



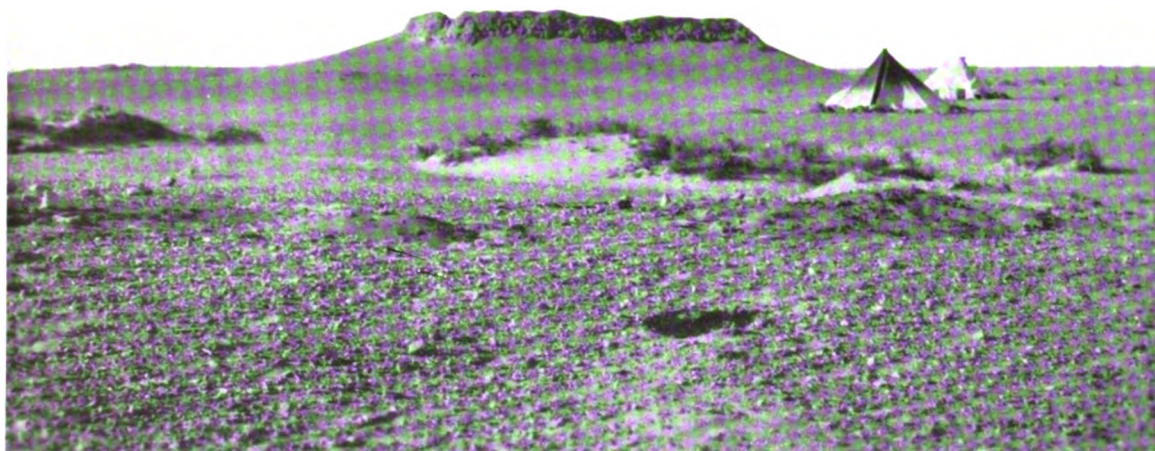
a. The plains of the Shuang-ch'eng-tsi oasis, poplars on the eastern bank of the Edsen-gol, and outliers of the Pei-shan, seen from Kiu-tun-tsi (A 37).



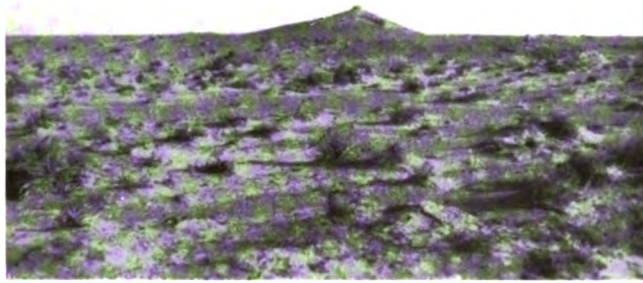
b. *Burukh* landscape of the dried-up Etsina Oasis: vegetation-bound sand-dunes and dead poplars. From between Khara-khoto and the Ikhen-gol.



a. Tsonchein-ama (A 1), a Han fort in the northern delta region, seen from NW.



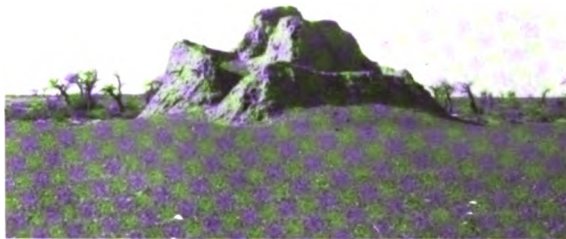
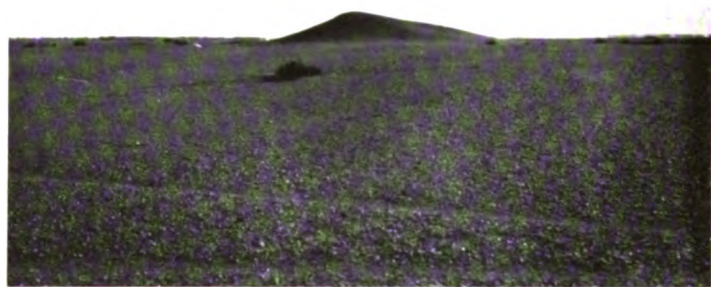
b. The site of Mu-durbeljin (A 8), during the Han period the head-quarters of the Tsondol Limes, as seen from E. In front of the fort are the low mounds which yielded most of the finds.



Ruined watch-towers of the Tsondol Limes :
A7 (a) and Tower 14 (b).

a

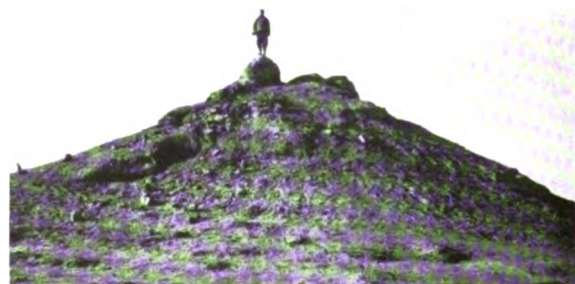
b



Watch-towers 22 (c) and 27 (d) of the Mören-gol
line of watch-posts.

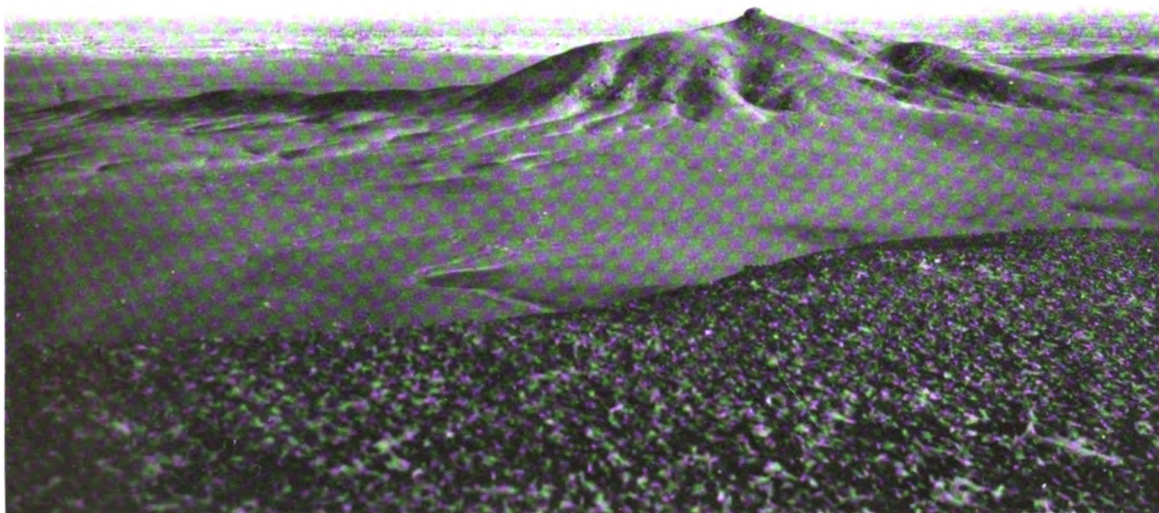
c

d

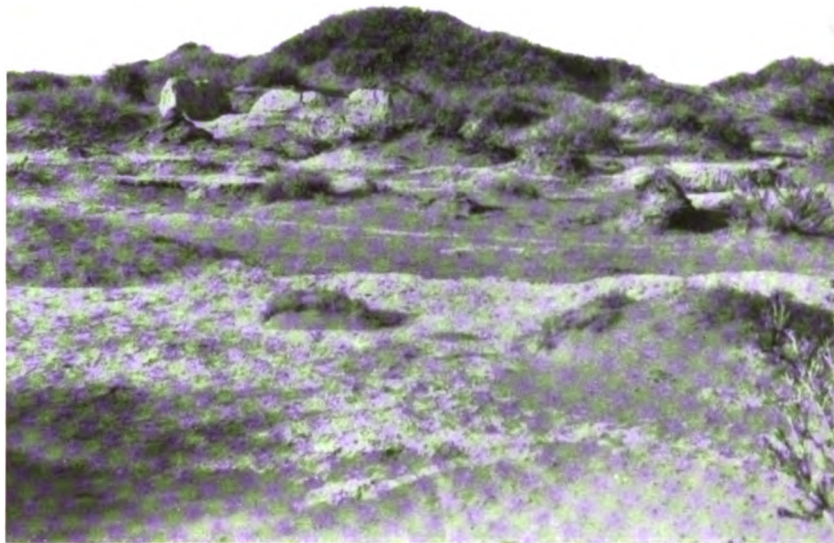




a. The ruined station A 10, south of Bayan-torei, seen from E.



b. The isolated hill of Jinst, crowned by the watch-tower A 11, and the salt pan of the dried-up Kū-yen-tse.



Walled enclosures in N and NE Etsina Oasis: K 688 (above) and K 710.

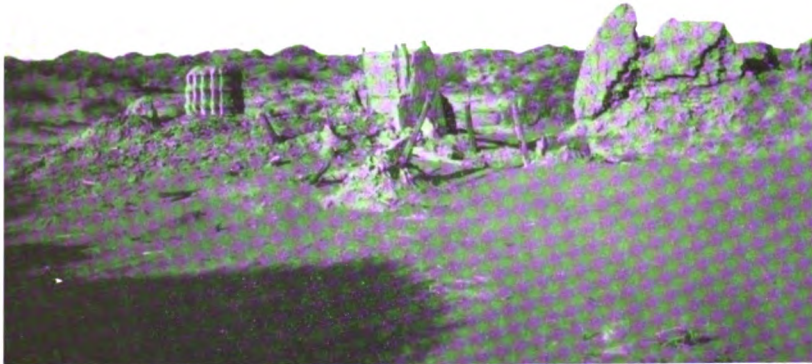
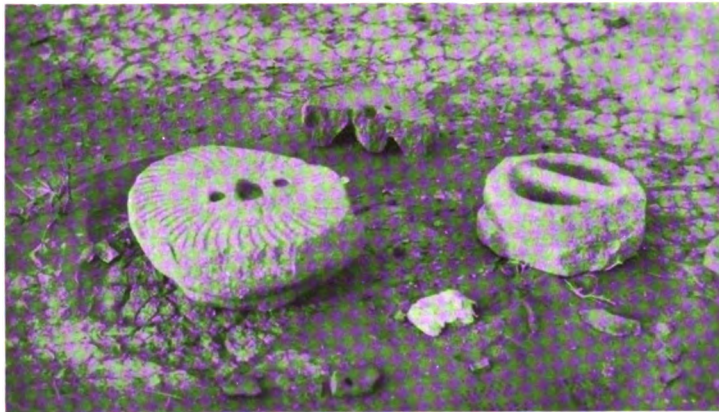


a



Threshing-stone rollers (a) and stone querns (b) on clay ground, now dried up and partly covered by drift-sand. From ancient fields of the Etsina Oasis.

b

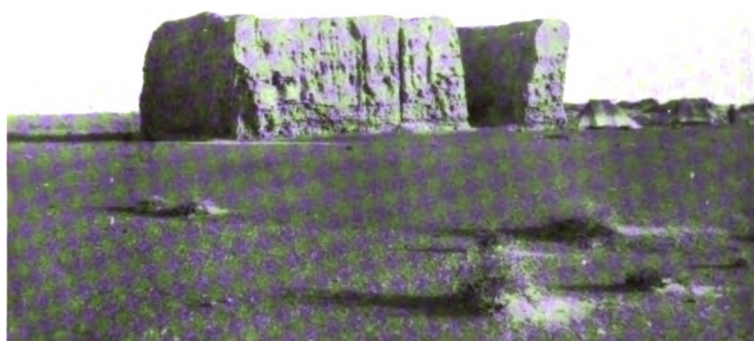


c. Ruined structures of Tsaghan-suburga (K 764), a temple in NE Etsina Oasis. From left to right: base of a *stupa*, the temple hall, and a dwelling.

Pl. VIII



a. House ruin 81, between Khara-khoto and Tsondol.



b. Fort 84 (N. Ulan-durbeljin).



c. Fort 86, near the E bank of the Ikhen-gol.

a. *Stupa* 60.



b. *Stupas* in front of Temple 73.



c. *Stupas* and walls
of Shrine 78.



Stupas on the crest of the wall of Khara-khoto. A view of the NW corner
as seen from the interior.



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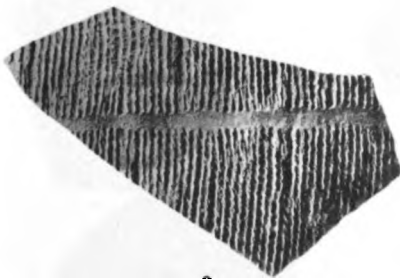
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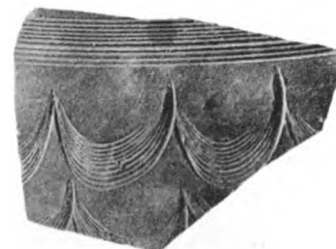
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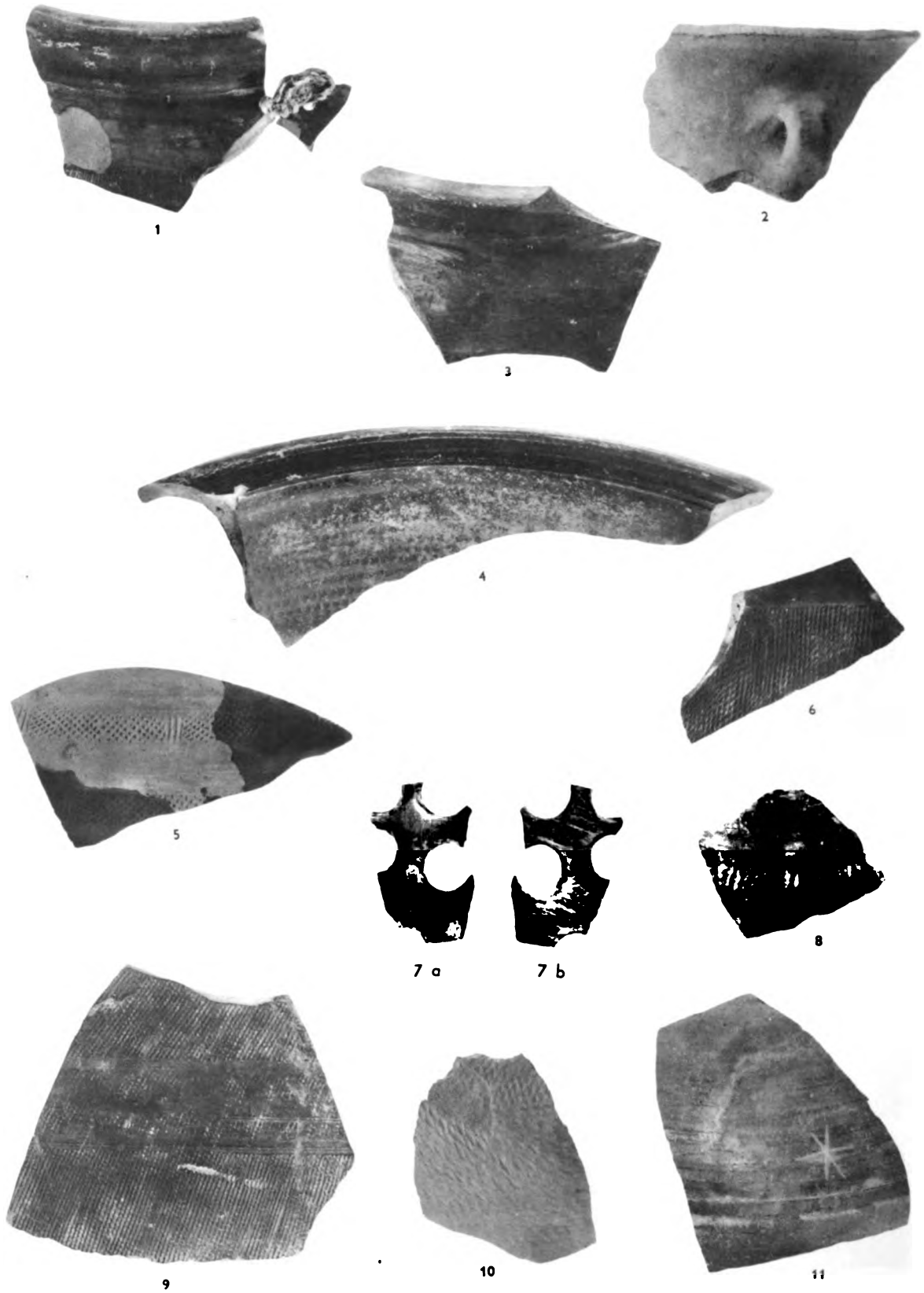


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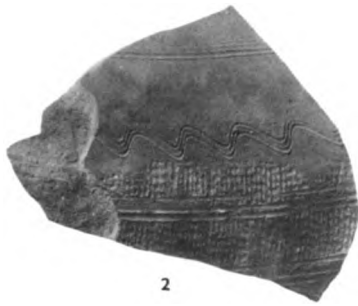
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Pl. 2.





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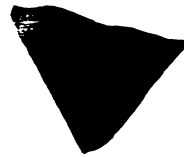
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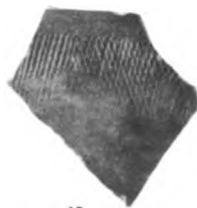
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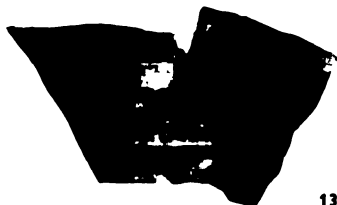
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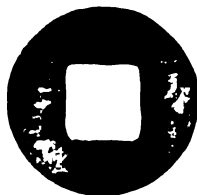
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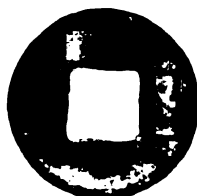
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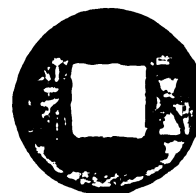
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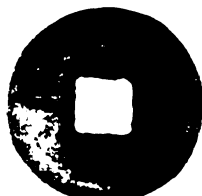
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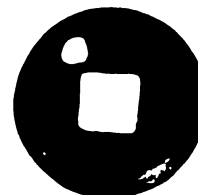
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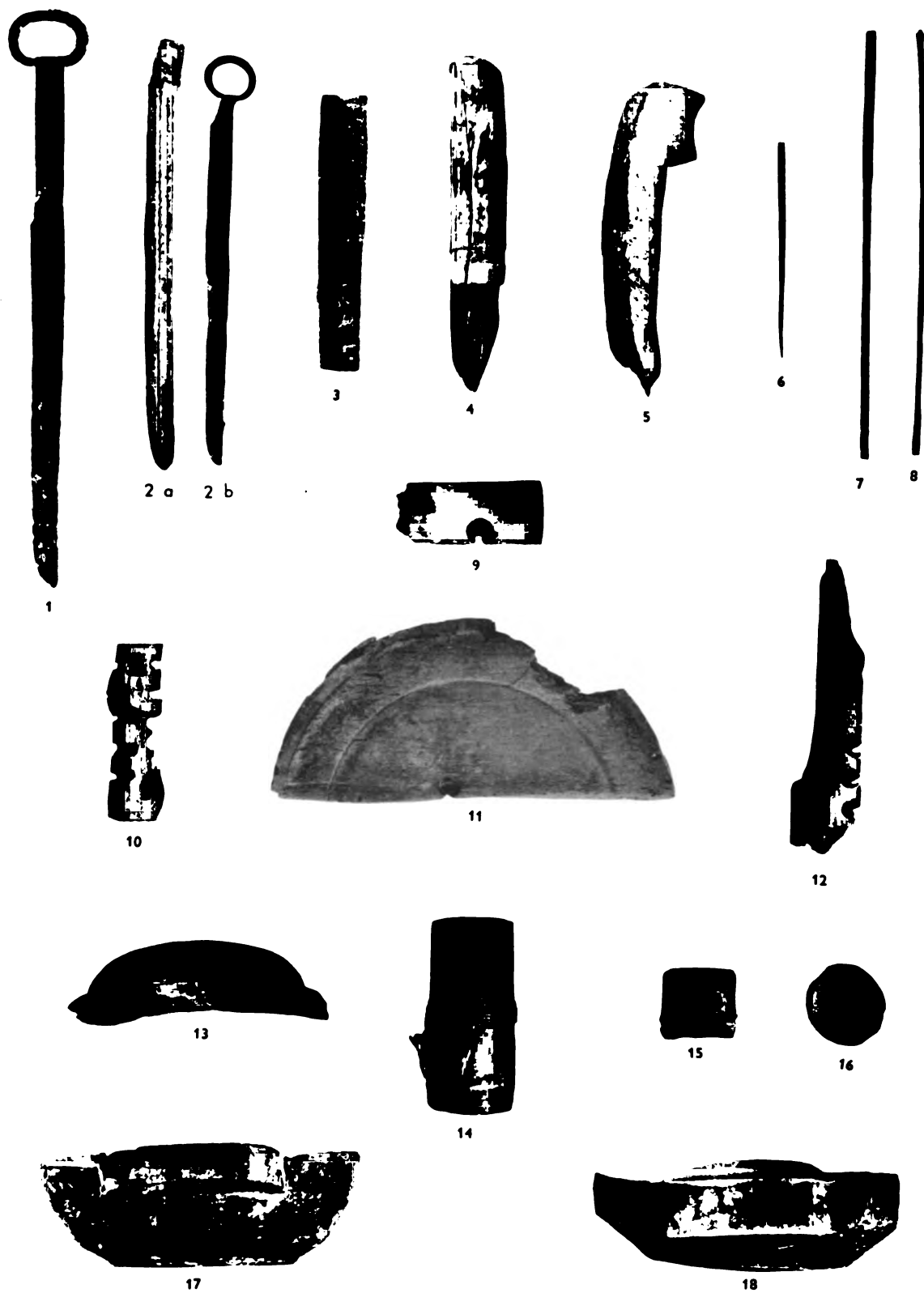
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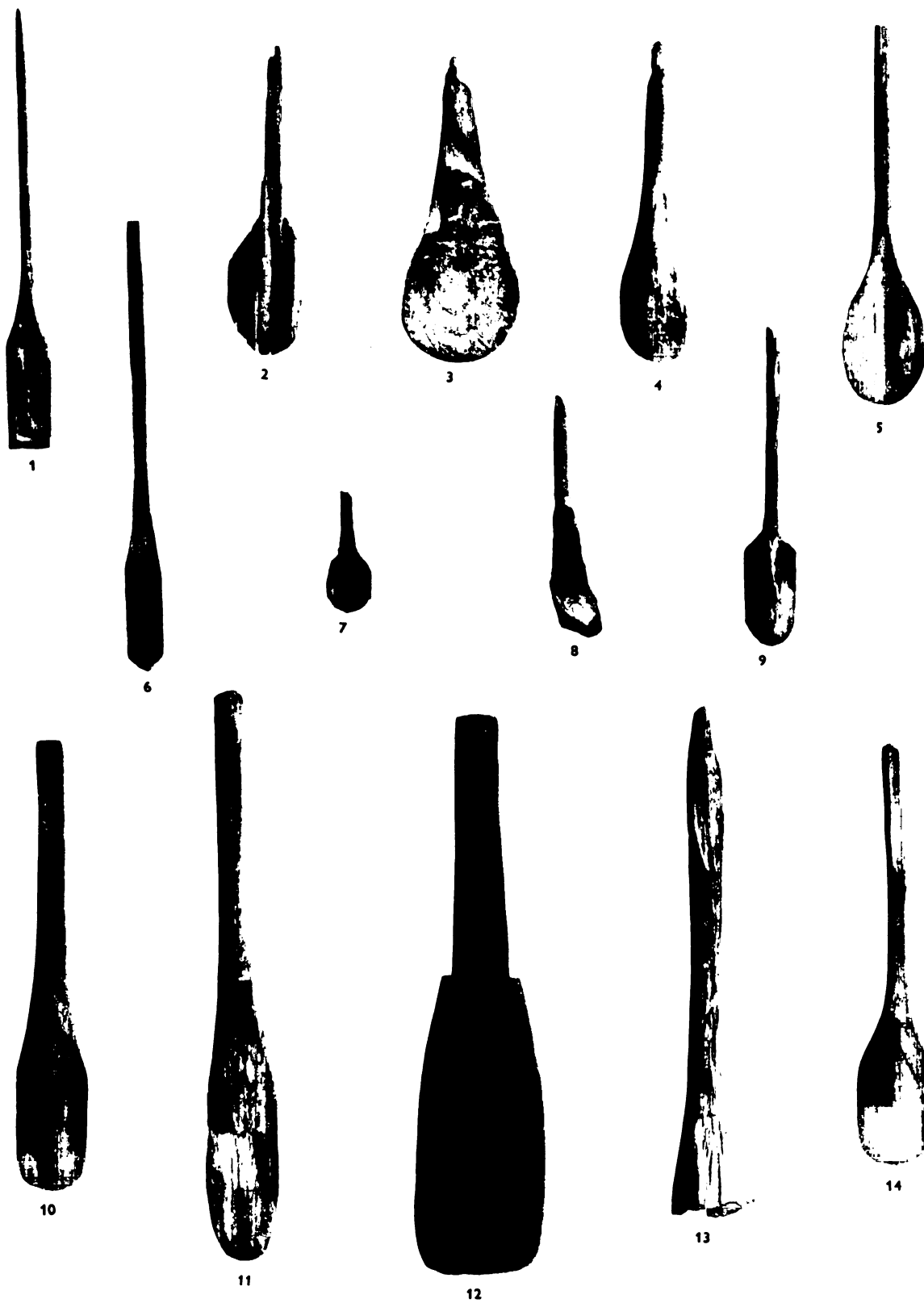


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Pl. 6.









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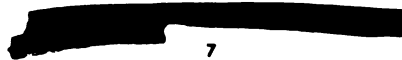
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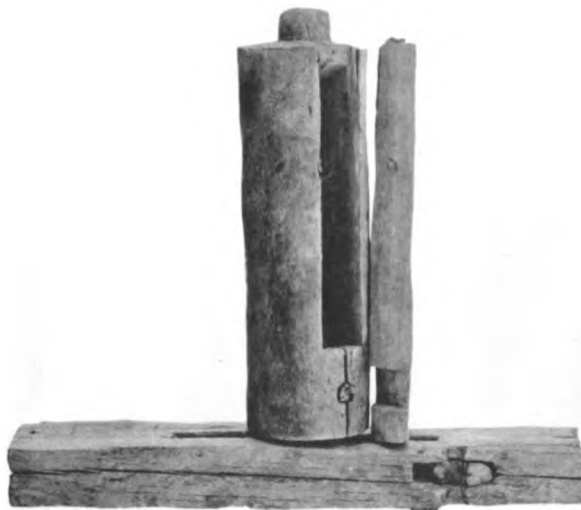
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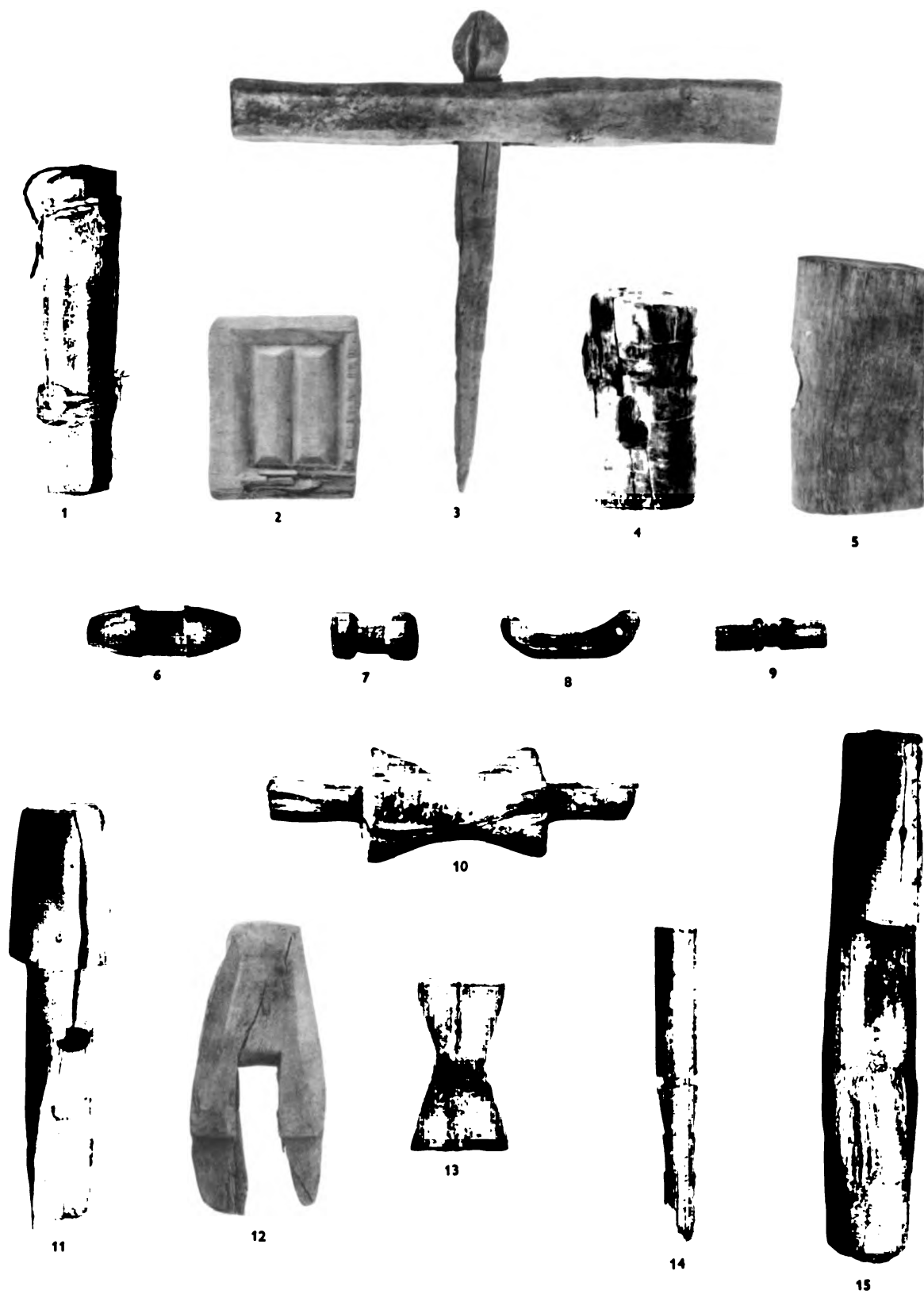


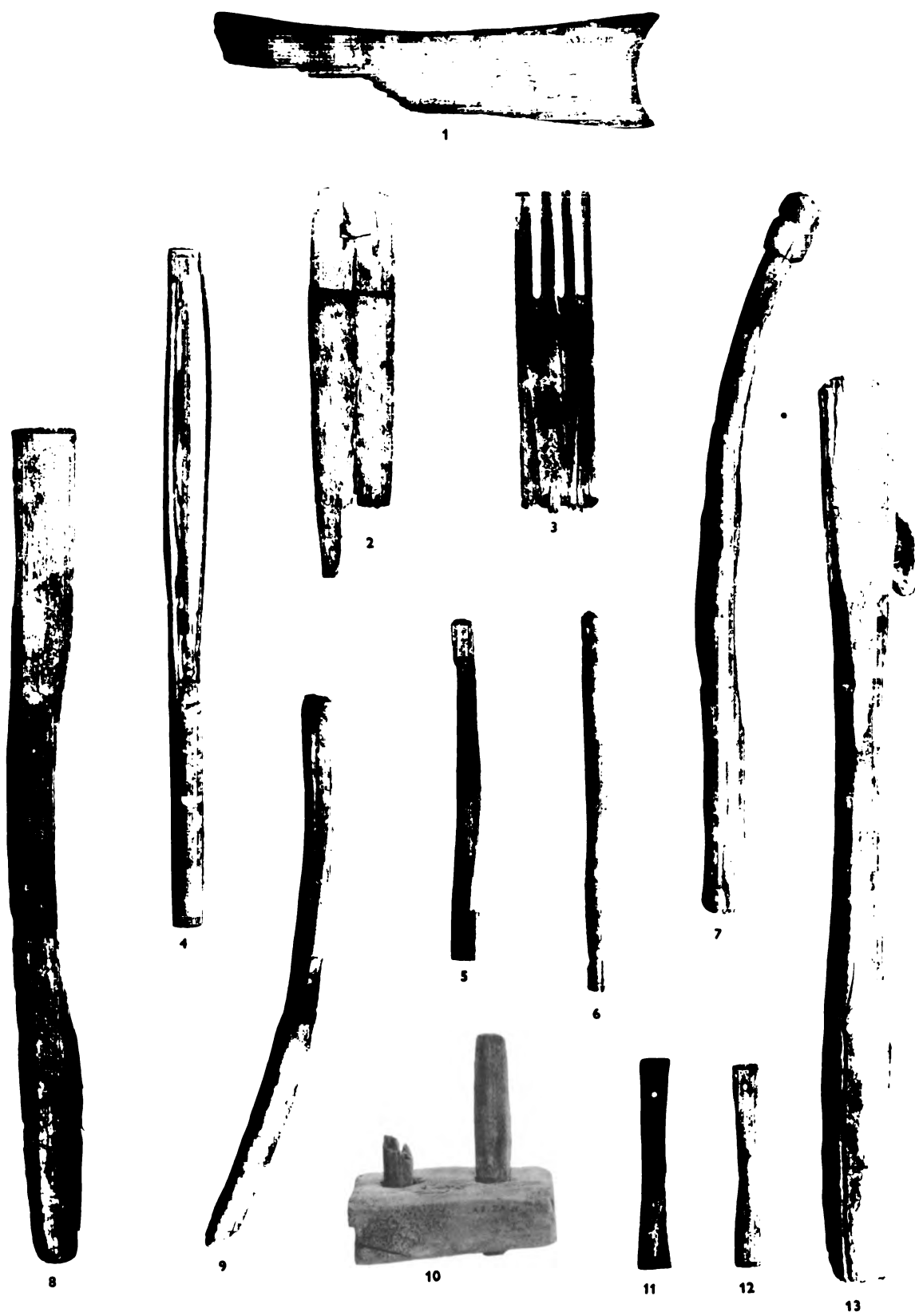
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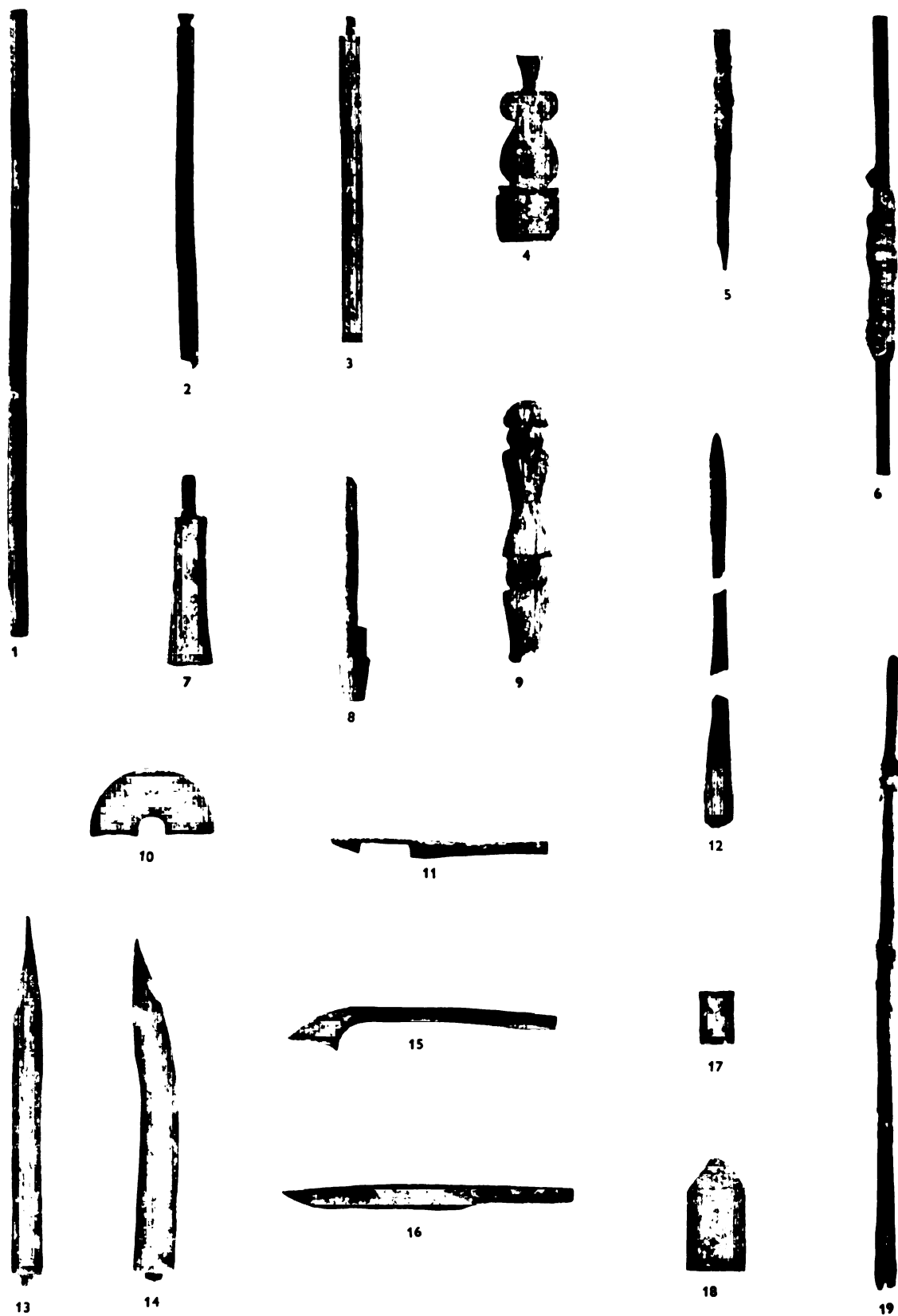


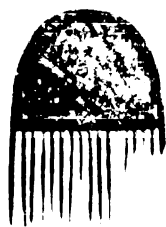
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Pl. 10.









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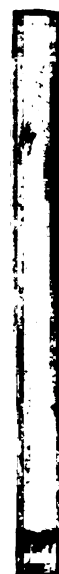
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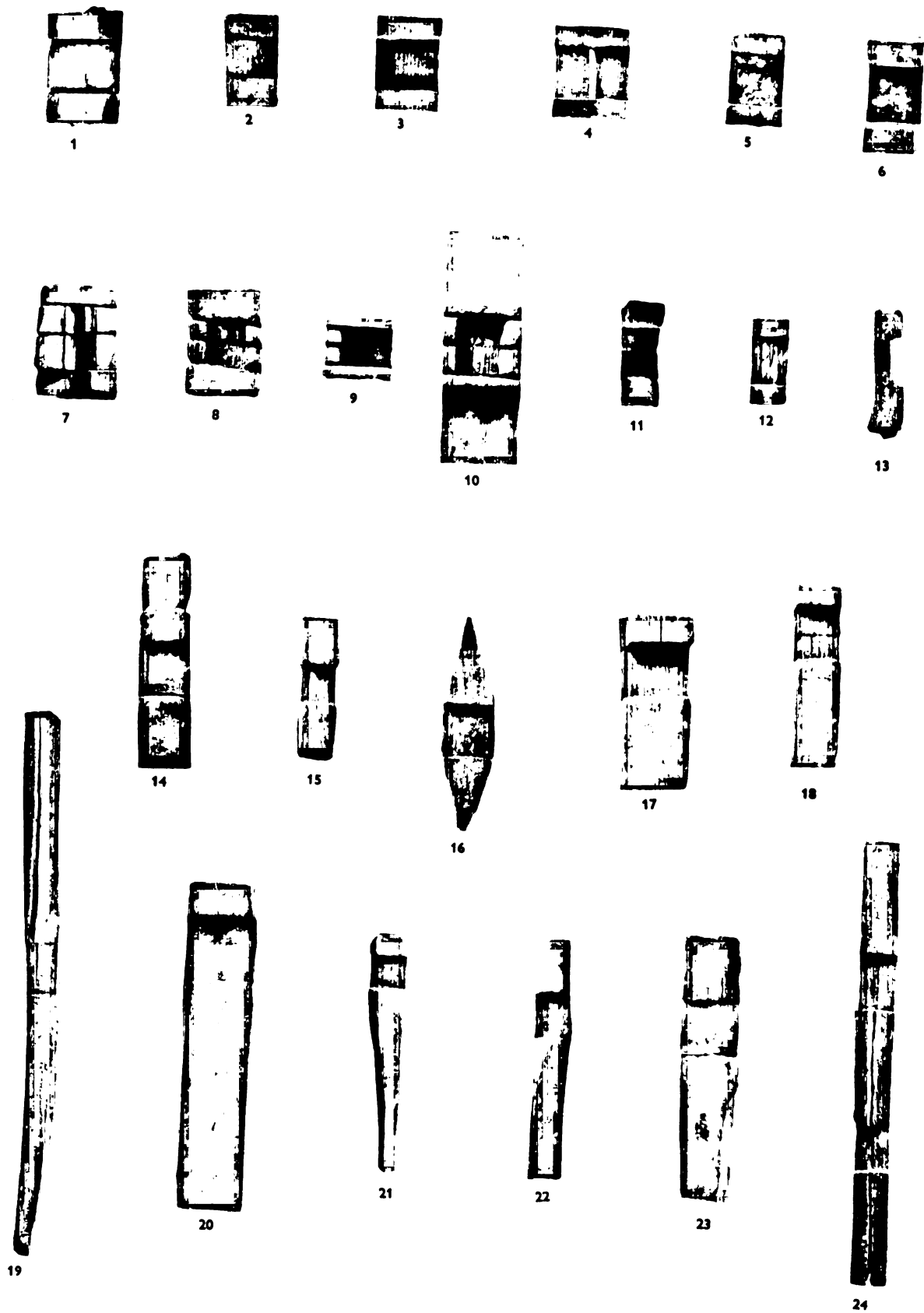


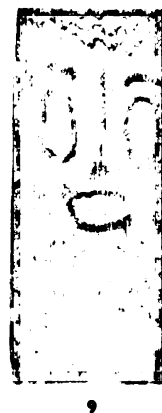
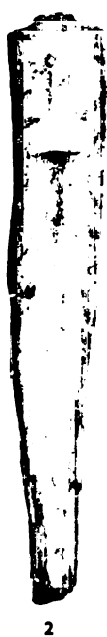
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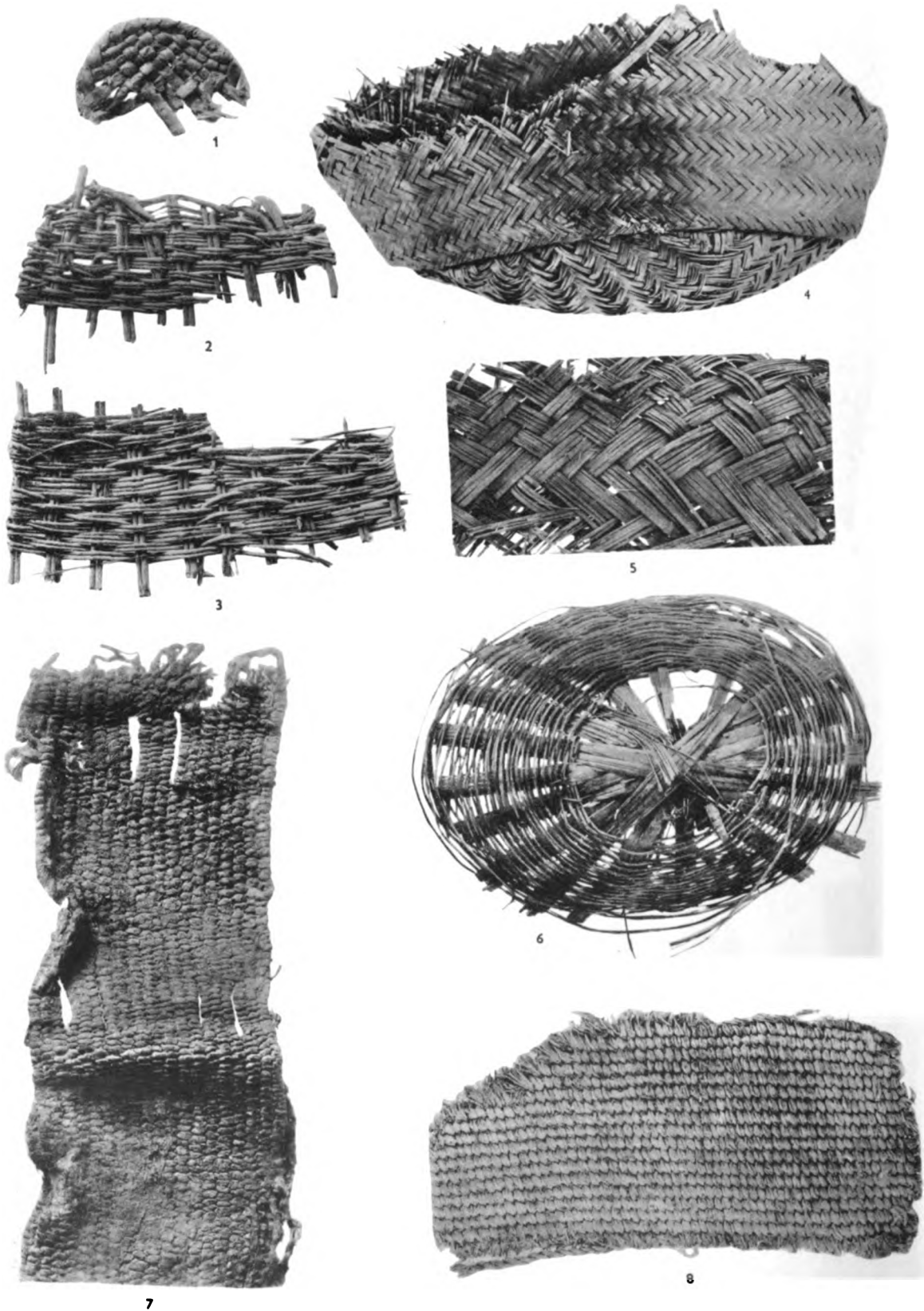


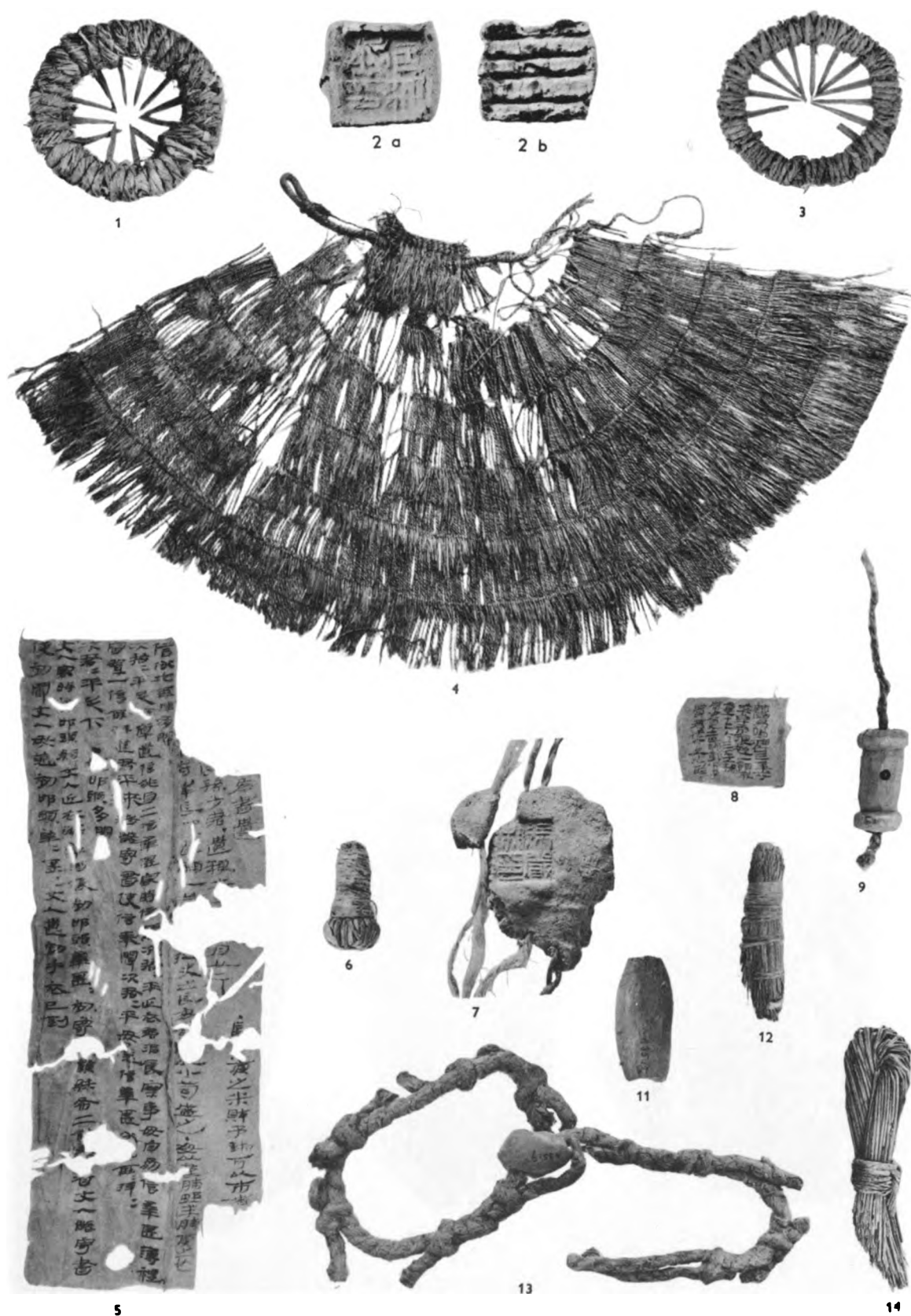
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Pl. 14.



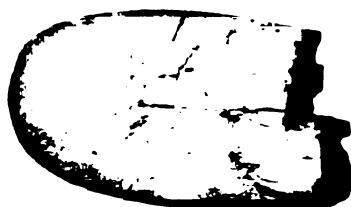








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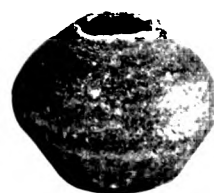
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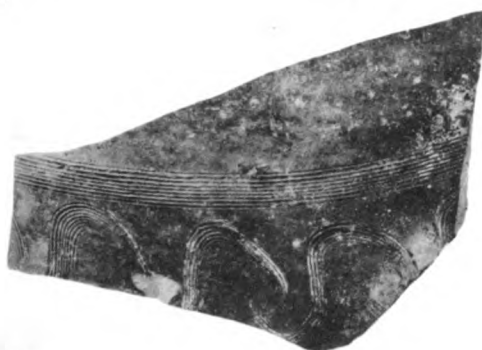
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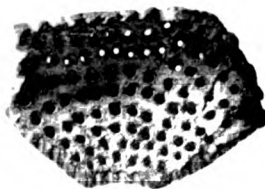
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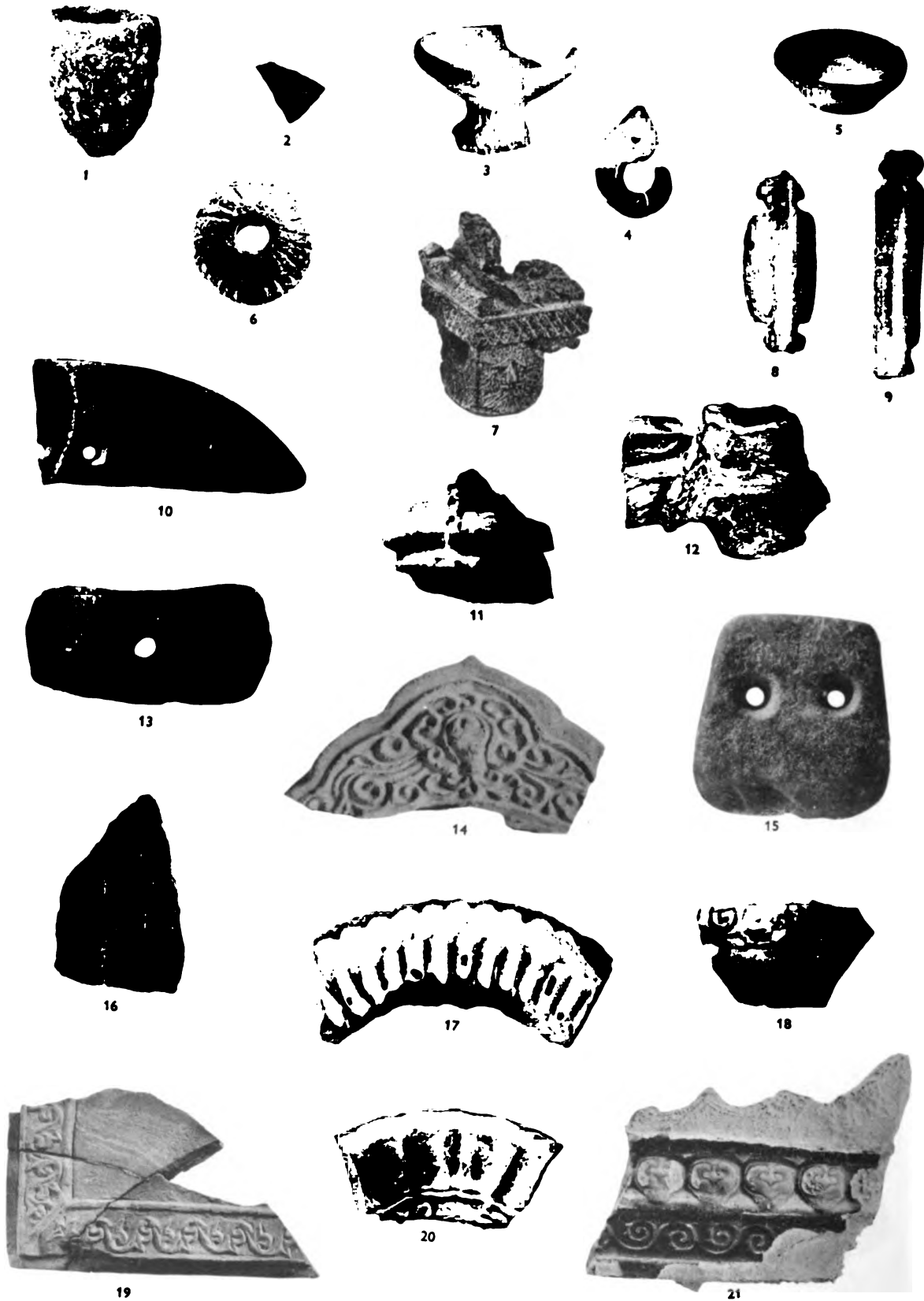
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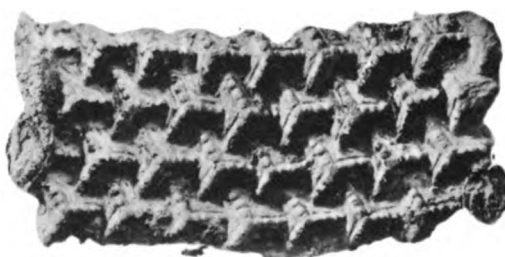
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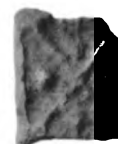
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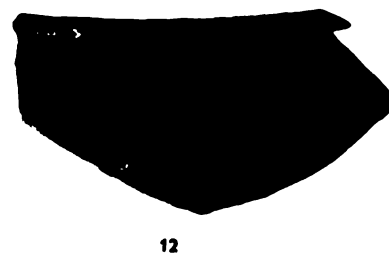
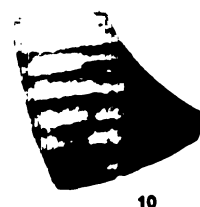
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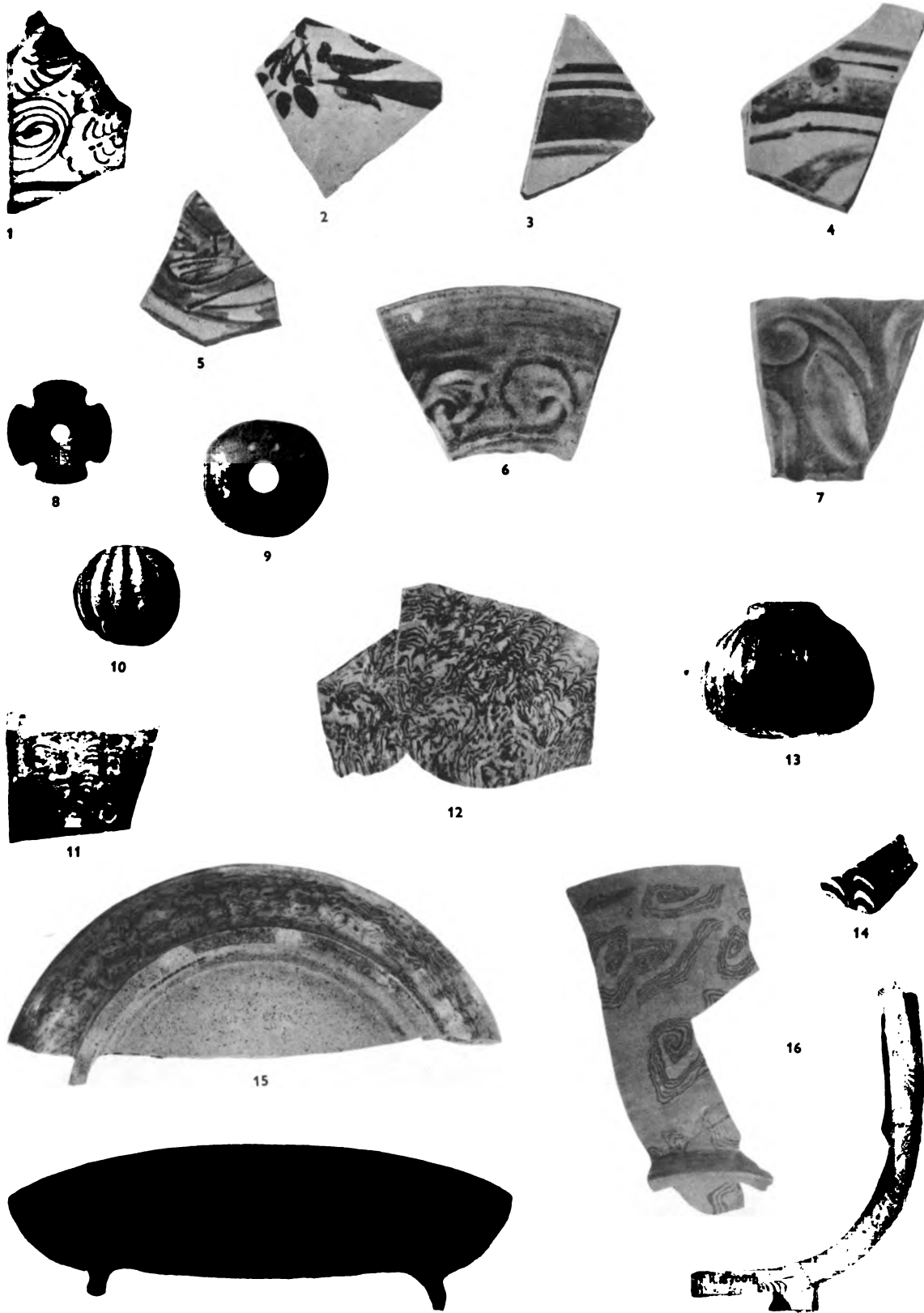


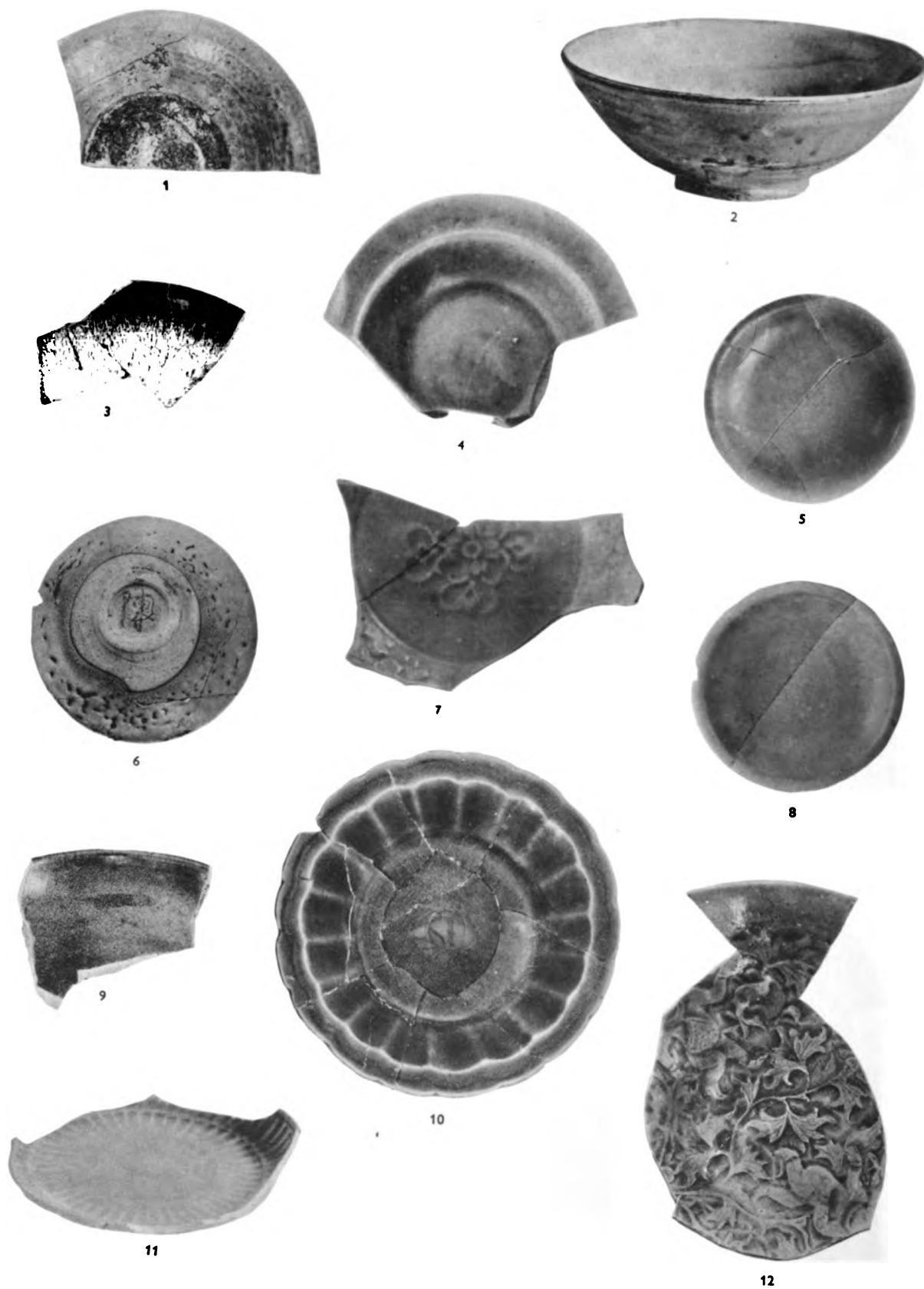
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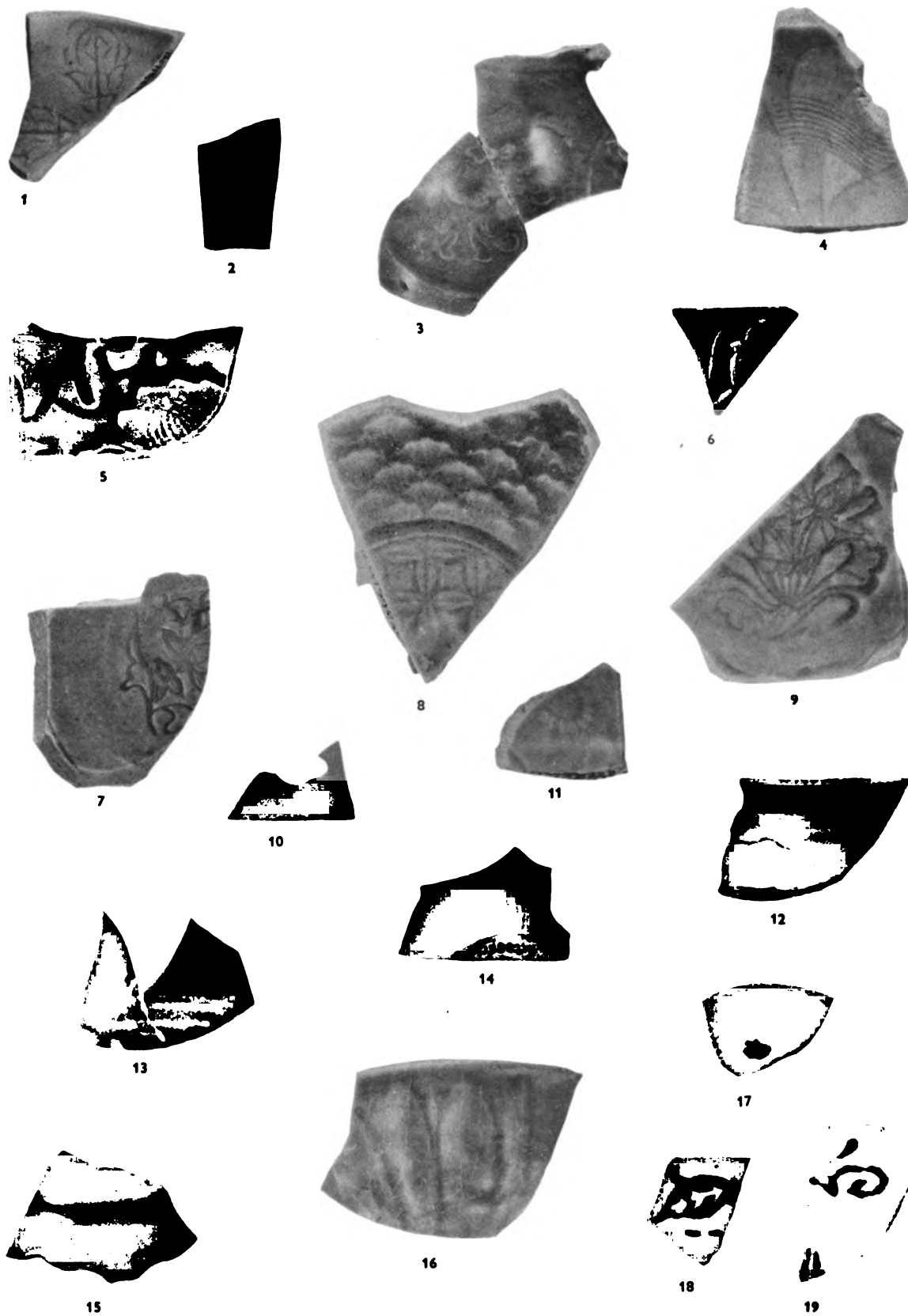


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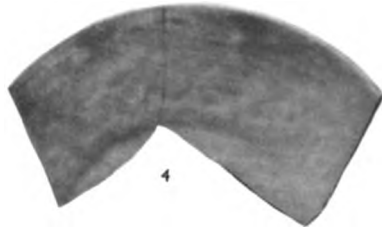


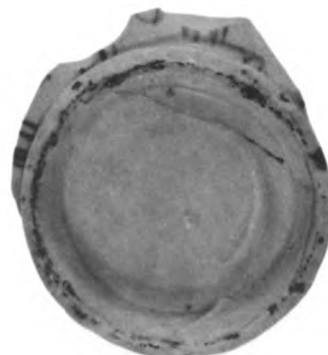


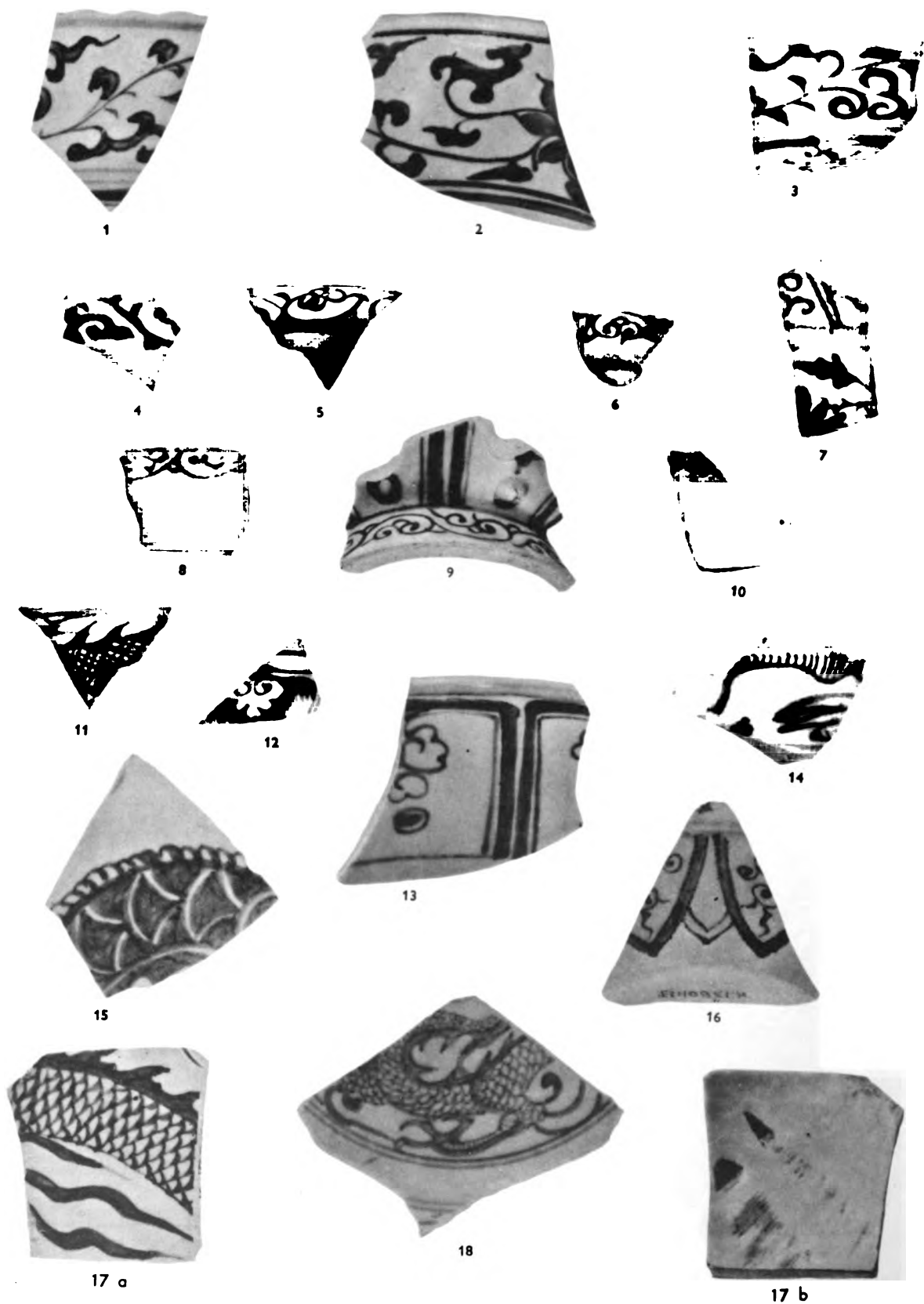


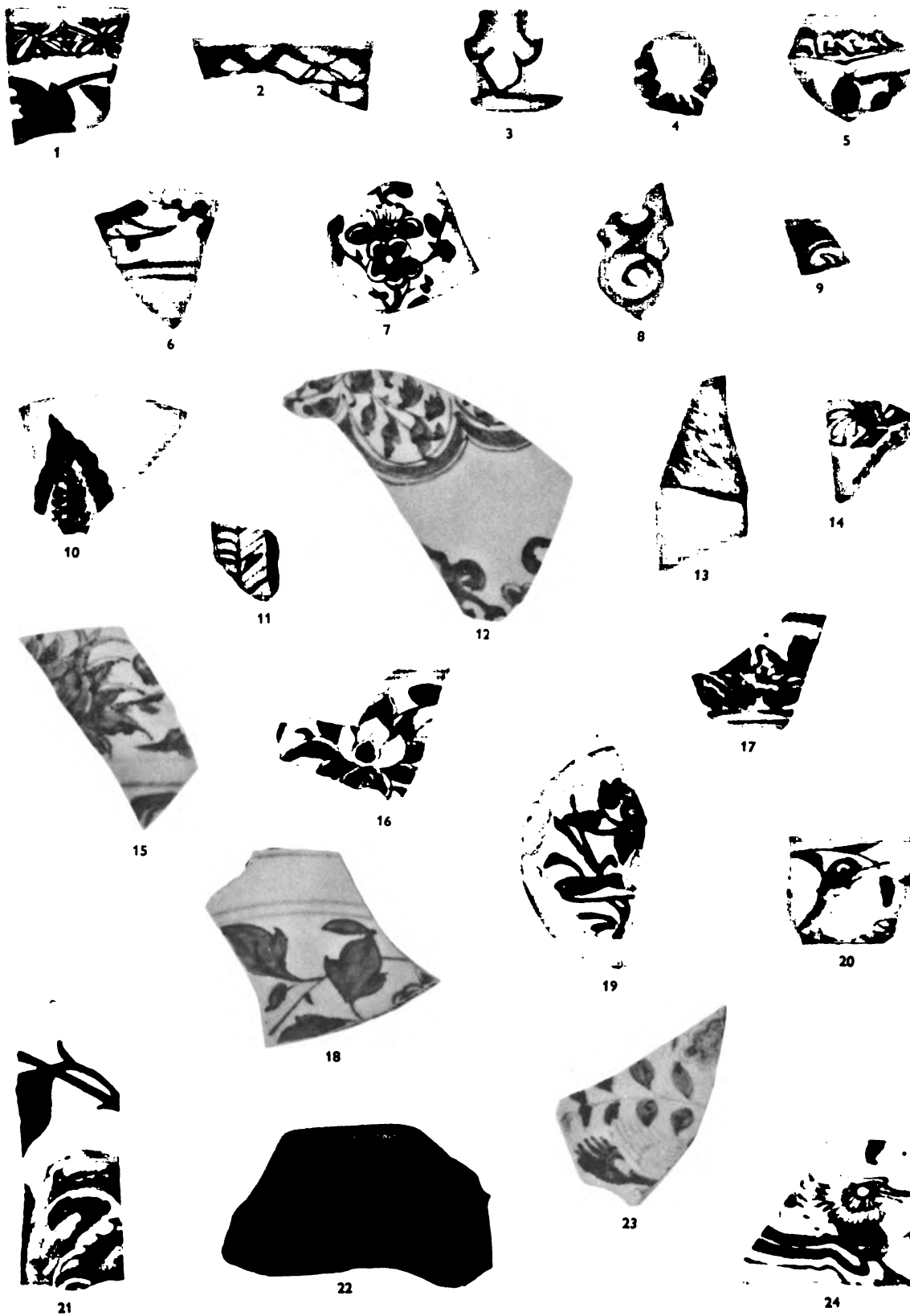


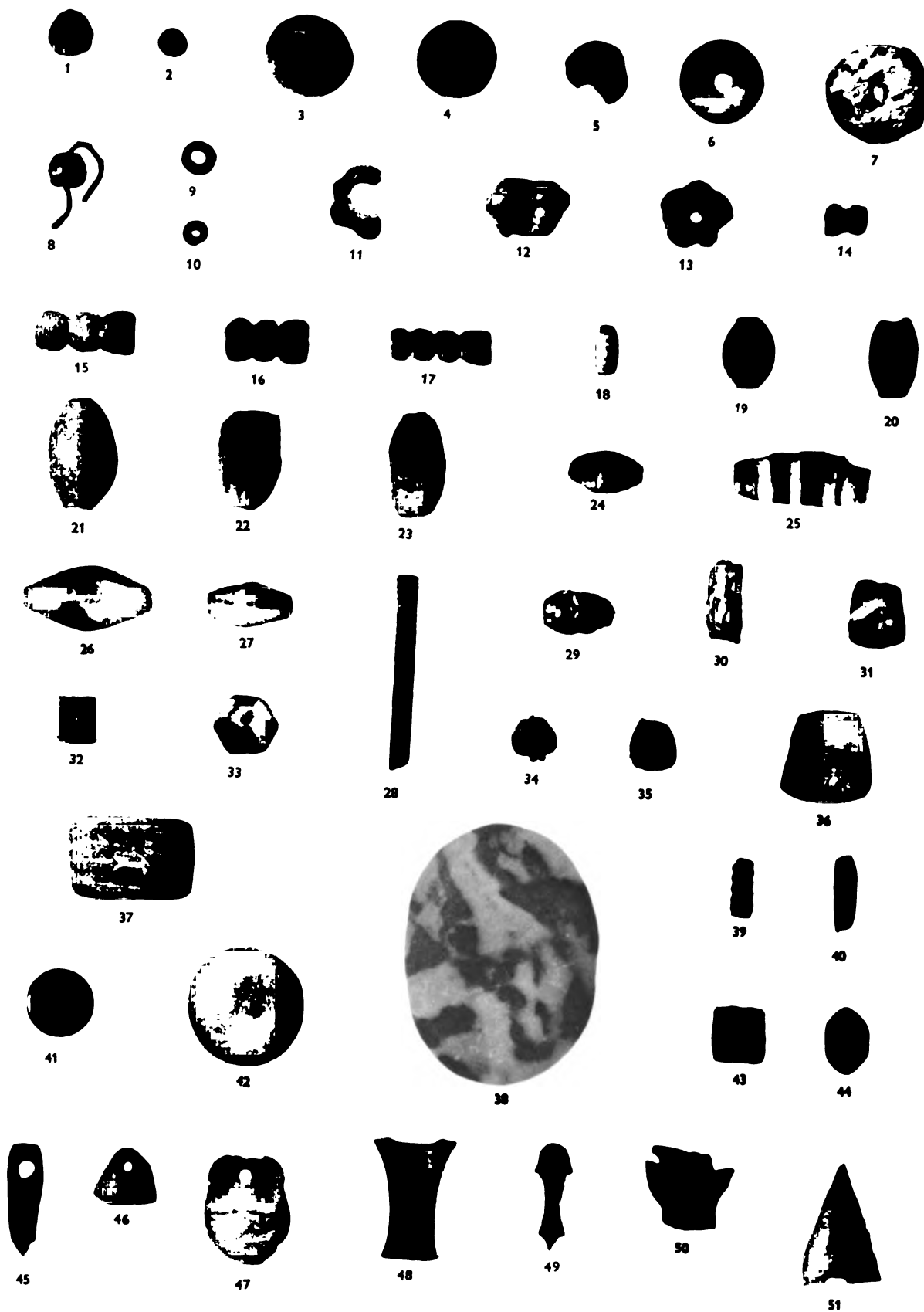
Pl. 26.



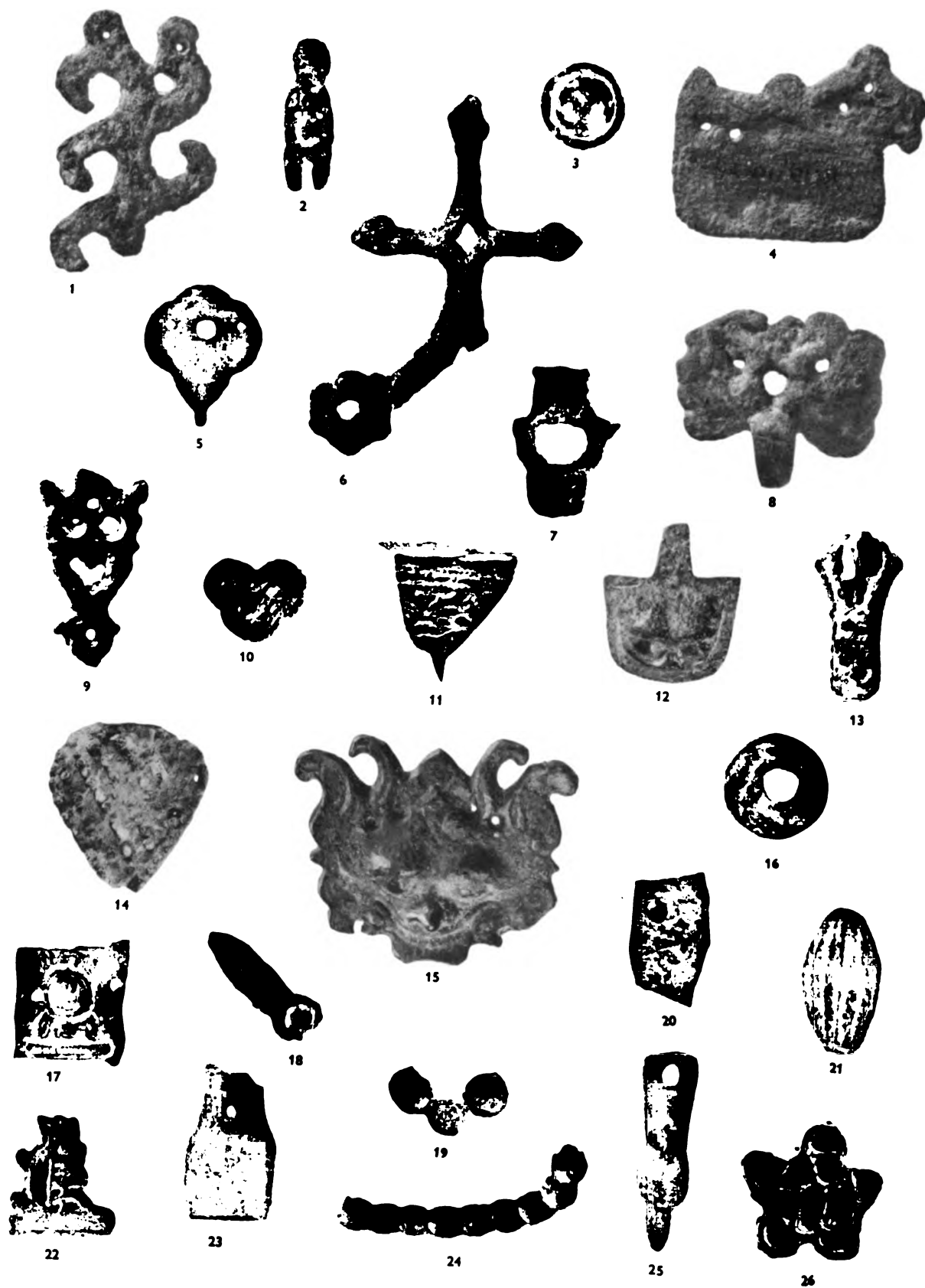


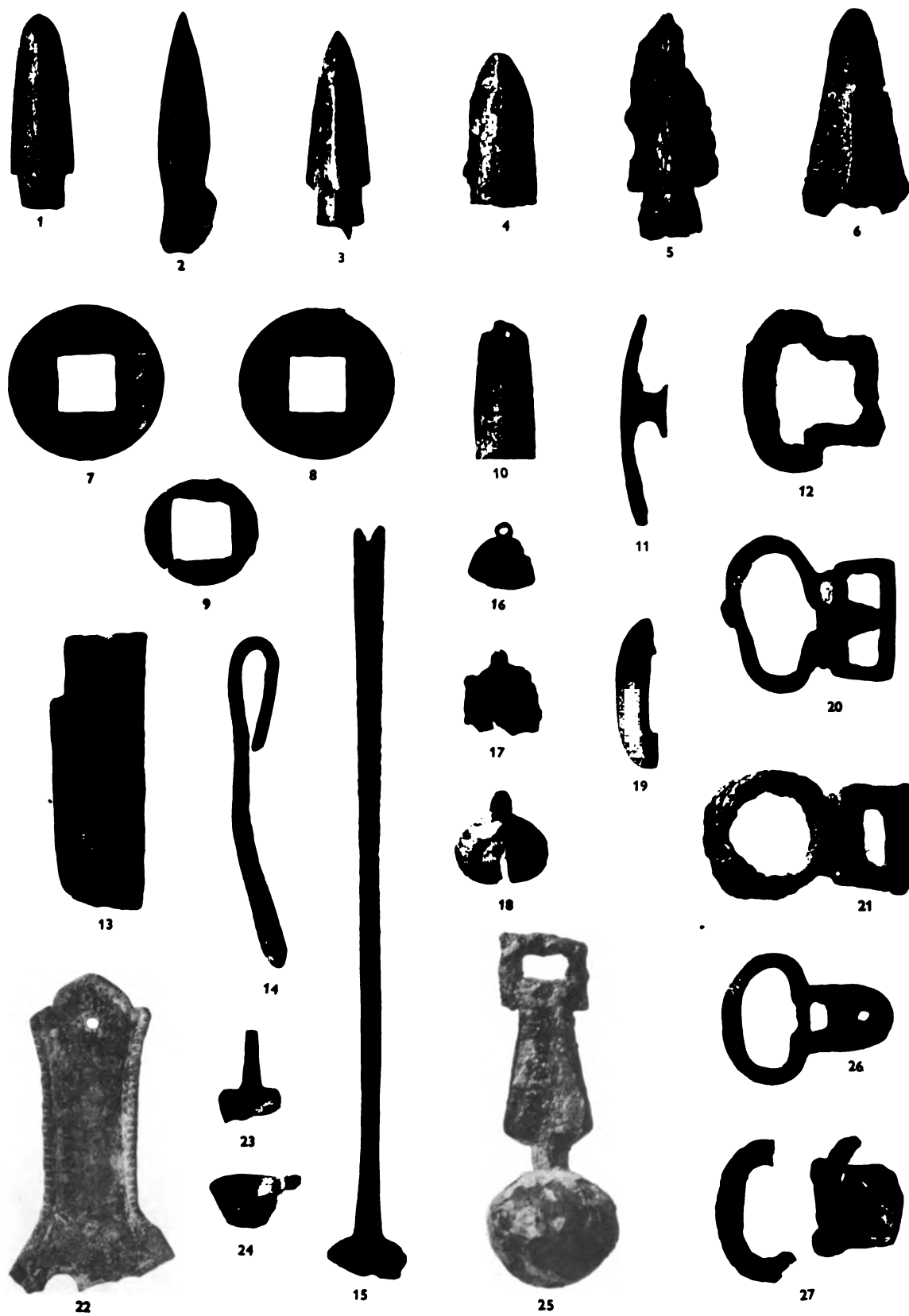


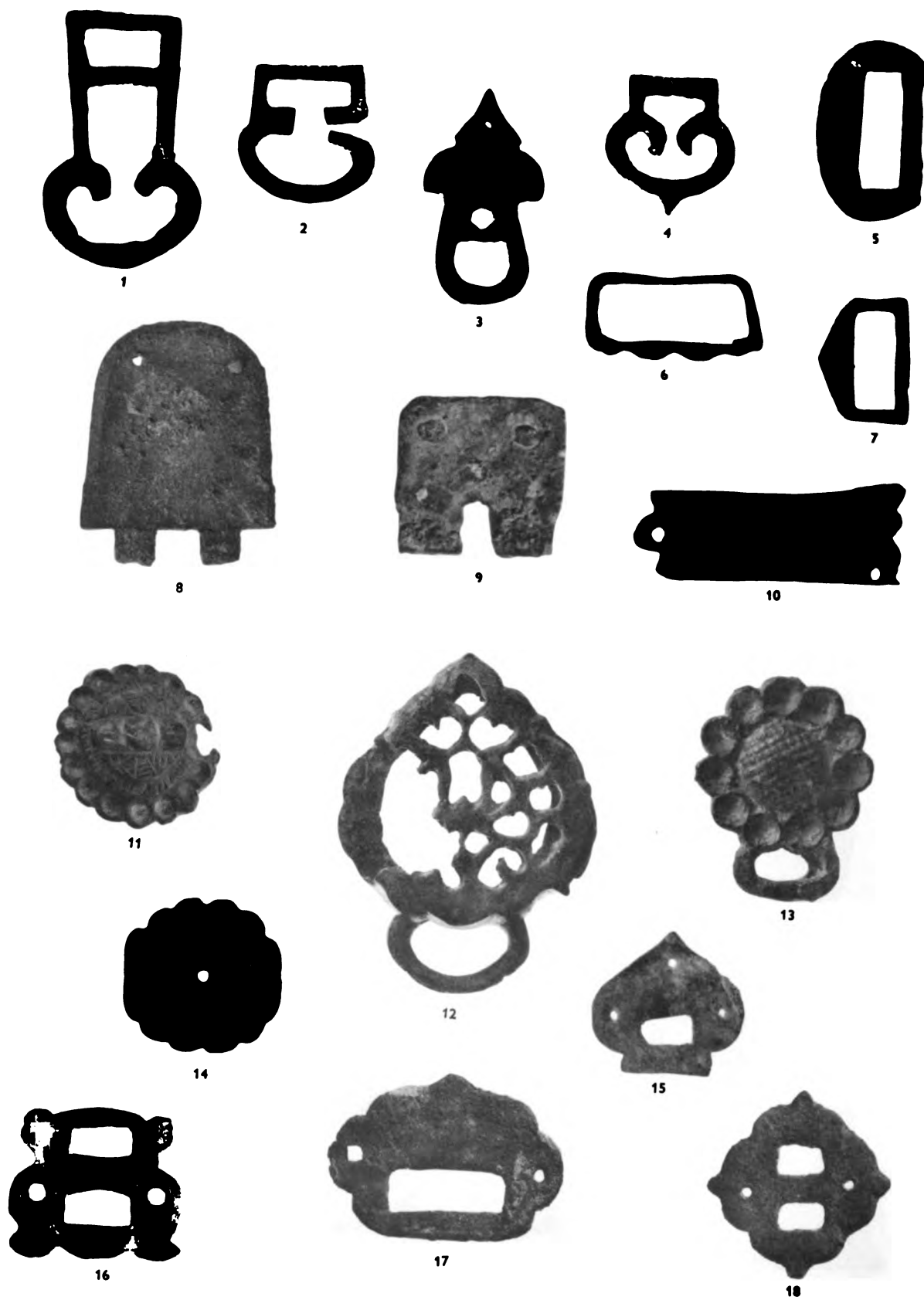






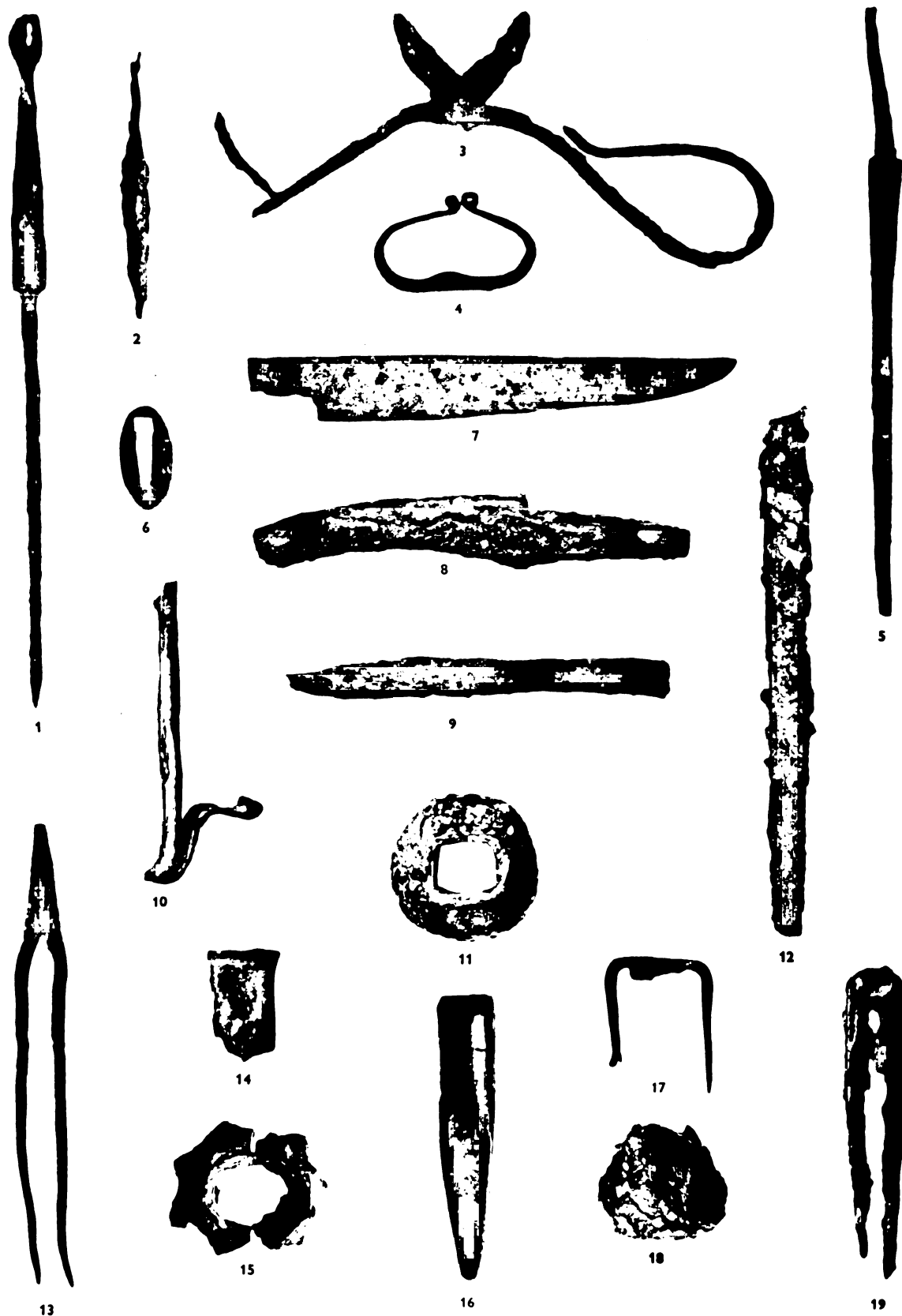


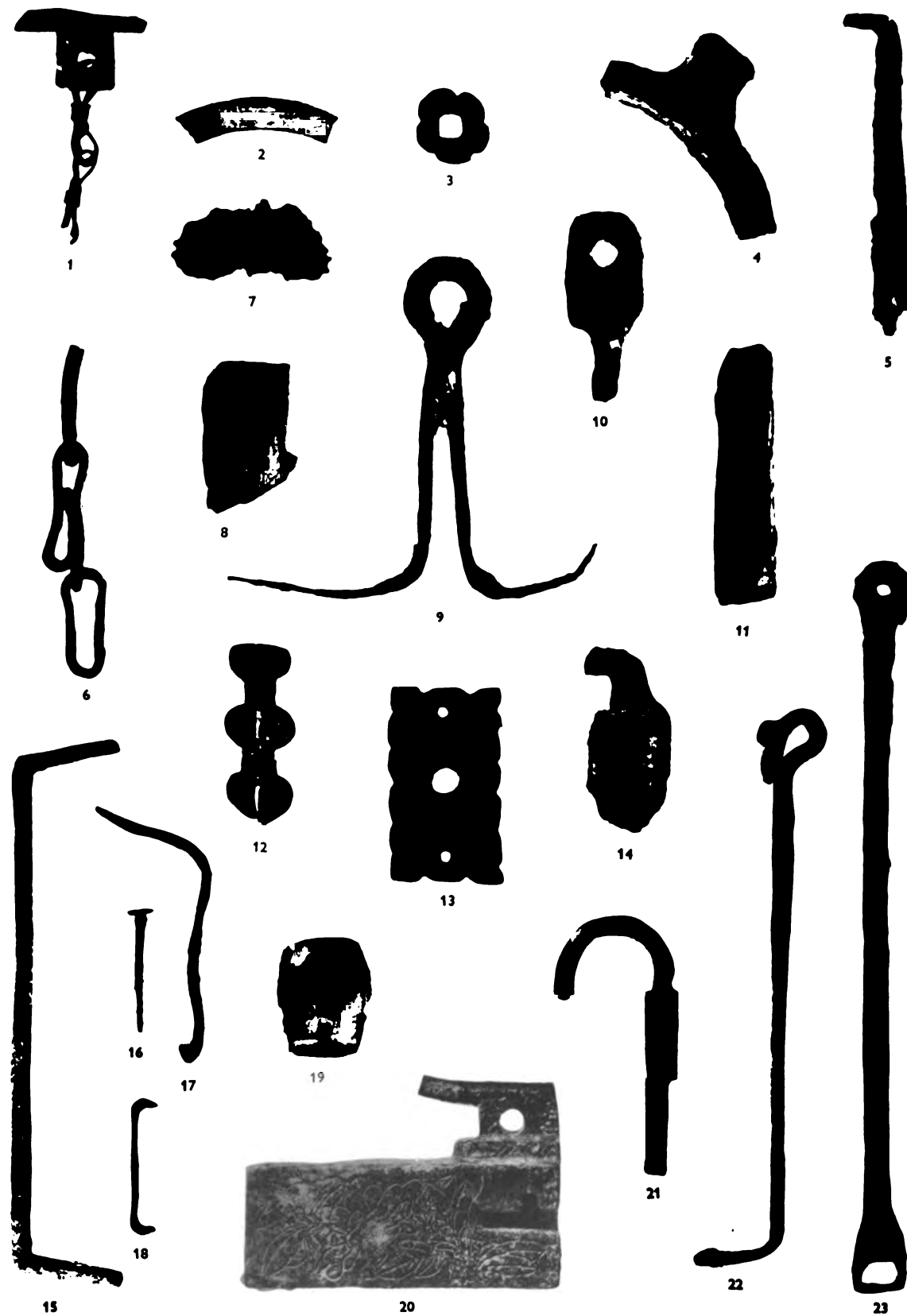


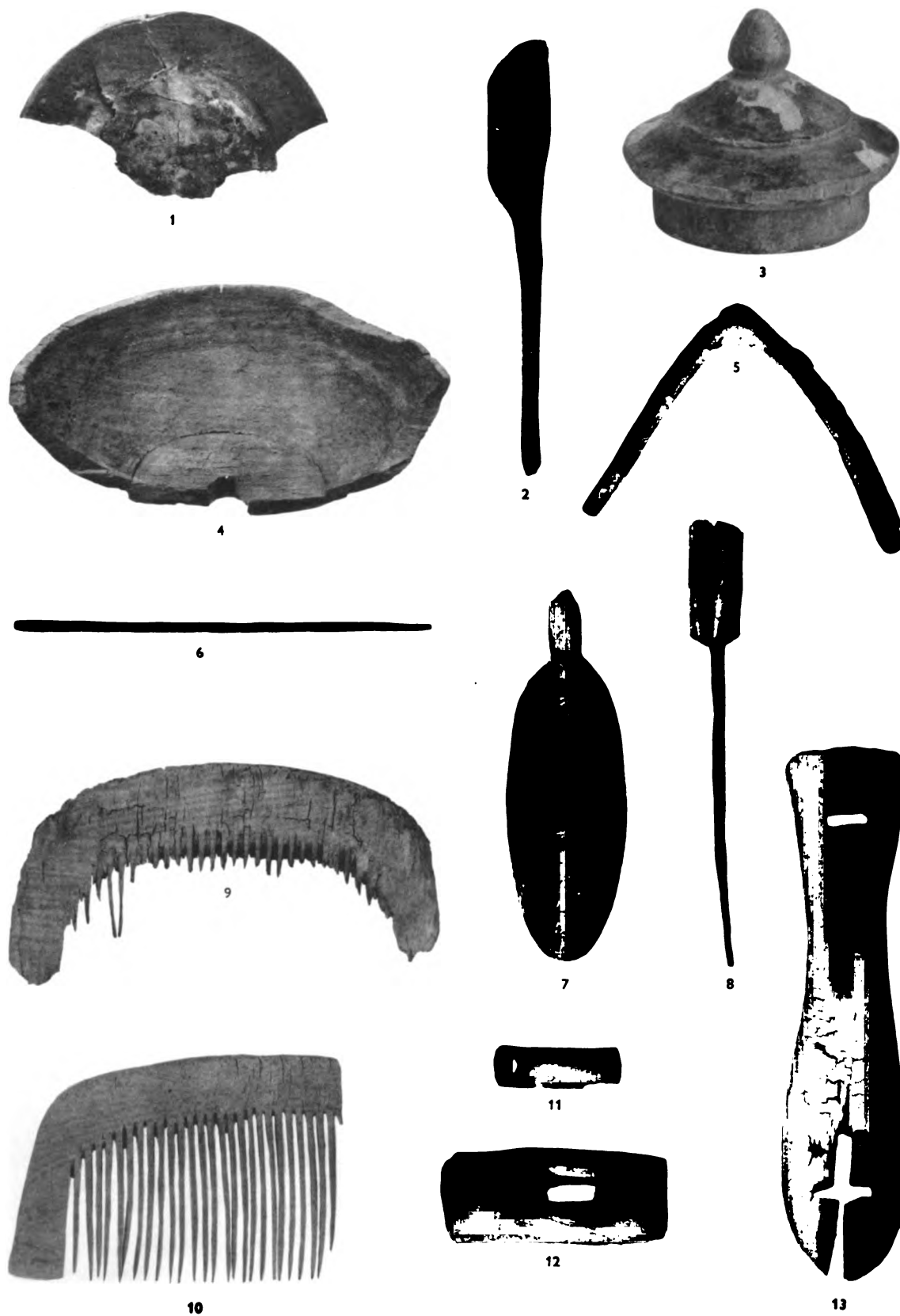














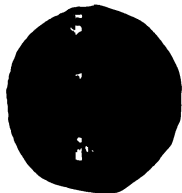
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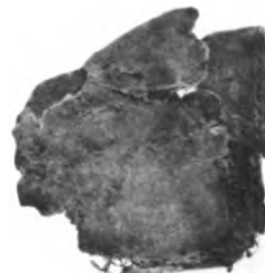
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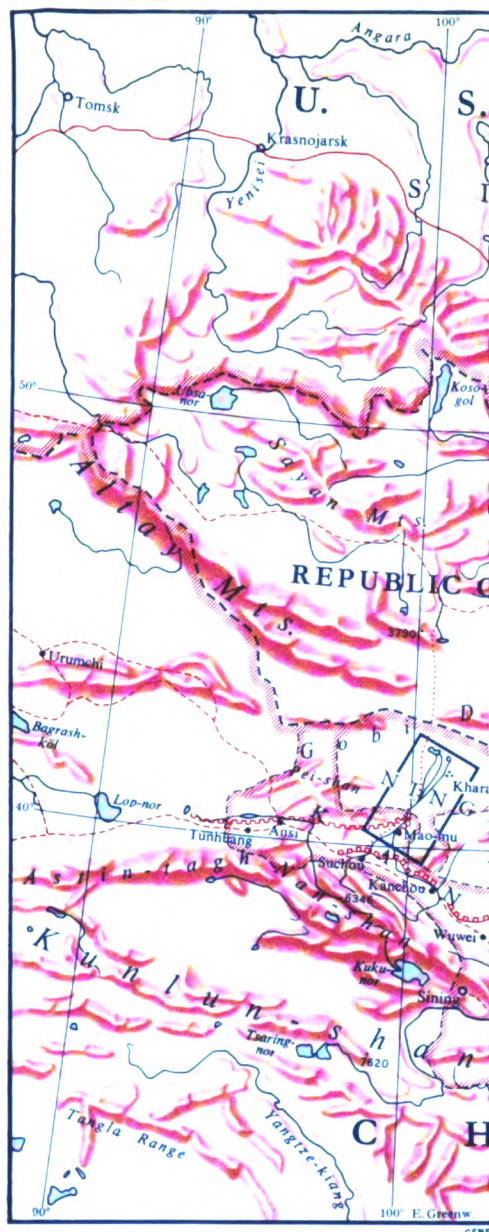
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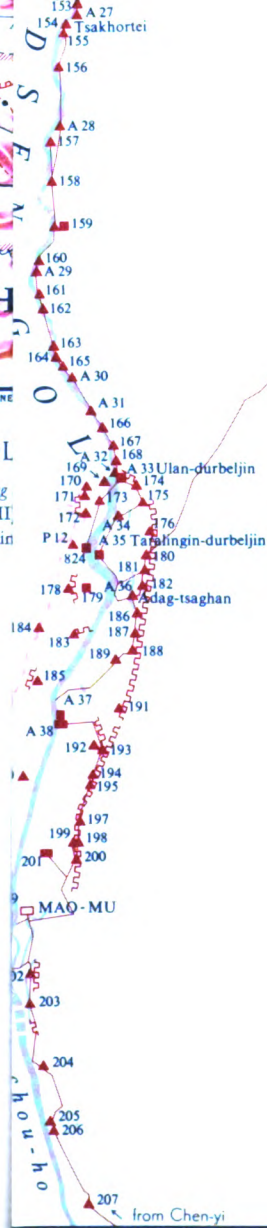


14



I. THE POSITION OF THE EDSÉN-GOL

Boundaries according to the atlas *Chung hua jen min kung ti tu* (Shanghai, 1953). The surveyed area (see Map II, between the provinces of Kansu and Ninghia, the main the Autonomy of The Etsina Banner.



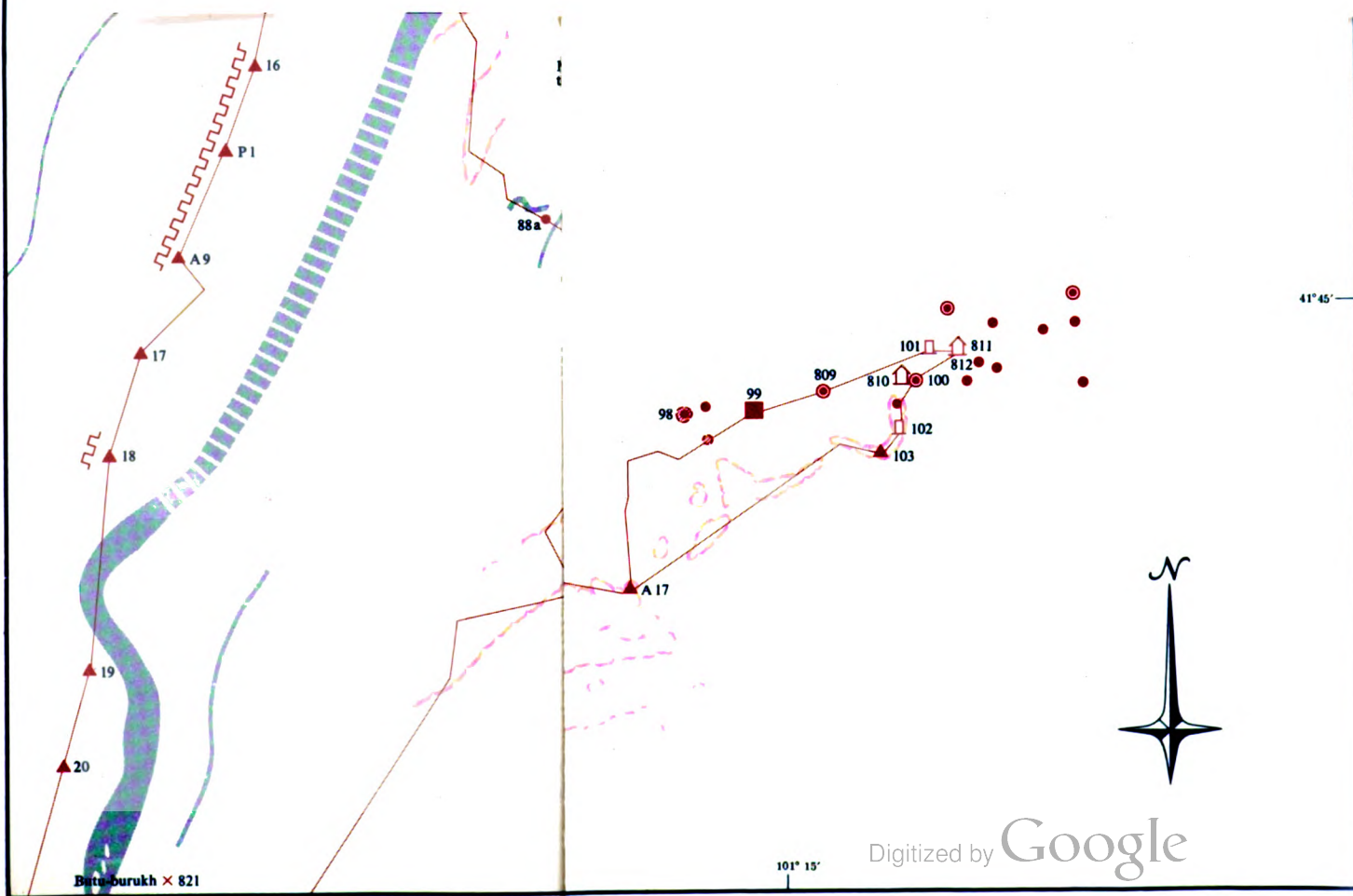
II THE EDSÉN-GOL REGION with archaeological remains

Scale 1:830 000



- Extant walled town
- Walled town from the Han Dynasty, or contemporary with Khara-khoto
- Fort, walled enclosure from the Han Dynasty or contemporary with Khara-khoto
- ▲ Watch-tower from the Han Dynasty, or (in a few cases) from Khara-khoto or later times
- ⋈ Extant temple
- ⋈ Ruined temple
- ⋈ Ruined stupa
- Remnants of frontier wall from the Han Dynasty
- Route (omitted in river-beds)
- Intermittent or unsurveyed stream
- Intermittent lake
- Marsh
- Salt pan (*shor*)
- Depression contour or escarpment

A 1, P 1, Number preceded by letters A, P or K: excavated site
K 676 (A, P = Han finds, K = post-Han finds)



SEP 19 73

MX 001 127 412

